

MAC GAMING SUPERGUIDE

D E C E M B E R 1 9 9 8

Macworld

THE ESSENTIAL
MACINTOSH® RESOURCE
www.macworld.com

**Mac Gaming
Is Back with a
Vengeance!**

EXCLUSIVE

**Tomb Raider II
Reviewed**

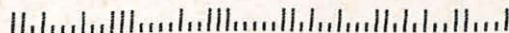
Top 20 Mac Games

Holiday Gift Guide

PLUS

**Macworld Lab Tests
19 Flat-Panel Displays**

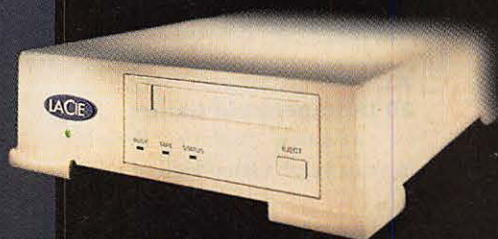
#BXBKJW****CAR-RT SORT**C063
#RBI2003S094 7#302556 2H 276-08
MAR 00
LLOYD A ROBINSON BALA
2003 SUNNYVIEW LA #1152
MOUNTAIN VIEW CA 94040-3839





PROTECTION.

You can never be too careful when it comes to backing up your ideas. That's why LaCie Tape Back-Up™ has a wide range of sizes, speeds



and formats. Each will protect your ideas from hazards like crashes, viruses and production interns.

LACIE

Made for ideas.

Macworld

Incorporating MacUser

Features

MACWORLD'S Holiday Gift Guide

70

It's holiday shopping season again. *Macworld* advises you on the best ways to part with your paycheck.

72

20 Unforgettable Games

BY CAMERON CROTTY Presenting this year's Game Hall of Fame.

78

10 Delightful Discs

BY CHRISTOPHER BREEN Our top ten picks for CD-ROMs that inform and entertain.

82

Supreme Stocking Stuffers

Excellent goodies for your Mac-loving friends and relations.

86

What, Fruitcake Again?

BY ANDY IHNATKO Creative ways to avoid the embarrassment of pathetic gift giving.

88

The World Is Flat

LAB TEST

BY JULIE POLITO The latest flat-panel displays are sleek, easy on the eyes, and downright affordable. Is it time to banish your bulky CRT? Macworld Lab tests 19 flat-panel displays to help you decide.

Create

Graphics

109 Photoshop Retouching Techniques

BY DAVID BLATNER Master tricks for cleaning spots, lines, and other unwanted flotsam from any Adobe Photoshop image.

Print

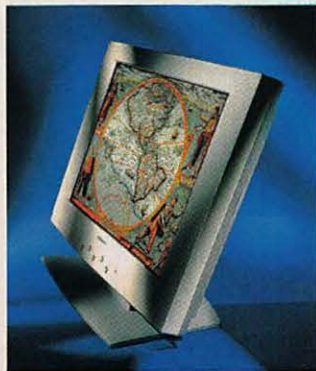
113 Easy Tables in QuarkXPress

BY BRAD WALROD Use these tools and techniques for overcoming QuarkXPress's table-creation illiteracy.

Motion

117 FileMaker Does Video

BY HENRY BORTMAN Transform FileMaker into a capable video postproduction assistant.



Mac Gaming Superguide

72

Game Hall of Fame

BY CAMERON CROTTY *Macworld*'s Holiday Gift Guide presents the definitive collection of Mac games. Do you have them all?

185

Nothin' but Net

BY CHRISTOPHER BREEN Don't blow away alien monsters and enemy warplanes alone—set up a gaming network and let your friends join the bloodbath.



192

The Game Room

BY PHILIP DYER What were they thinking? Pondering the Mac gaming world's low points in the Game Hall of Shame.

When it comes to display technology, this is definitely in, page 88.



Will Microsoft and Netscape duel to the death? page 196.

News

- 31 Let Your Browser Do the Walking**
Netscape's Navigator upgrade could make your Web life easier.
- 32 Desktop Color Separation**
Xanté's Accel-a-Writer 3G printer and FilmStar 2 processing unit offer near-imagesetter film quality for about \$7,000.
- 32 AppleScript Meets Photoshop**
Main Event's Photoscripser lets you use AppleScript to automate image-editing operations.
- 33 Adobe Expands Web Turf**
Adobe's new ImageStyler software brings Illustrator-like functions to Web-graphics creation.
- 33 Product Watch**
The latest products for your Mac, including a pair of plug-ins that add transparency capabilities to Adobe Illustrator 8.0.
- 34 A New SCSI Standard**
Ultra160/m SCSI promises to deliver up to twice the speed of Ultra2 SCSI.



- ## Opinion
- 15 Letters**
 - 27 The Vision Thing**
BY ANDREW GORE Things are better than ever for Mac gamers, but there's still plenty of room for improvement.
 - 196 The Desktop Critic**
BY DAVID POGUE Who will die first in the Netscape Navigator/Microsoft Internet Explorer suicide pact?

10 How to Contact Macworld



Apple's new 300MHz PowerBook G3 with DVD lets you watch movies while on the go, page 38.

Secrets

- 103 What Do You Want to Read Today?**
BY JOSEPH SCHORR Discover the lesser-known charms of Adobe Acrobat Reader.
- 105 Quick Tips**
BY LON POOLE Tips, tricks, and shortcuts.

ON THE COVER

Original art for *Tomb Raider II* created by Core Design Ltd.
Cover art digitally enhanced by John Lund.

Netscape and Microsoft offer hints of future browser directions, page 31.

Reviews

- 38 ★★★★★ PowerBook G3/300**
High-end portable system
- 40 ★★★½ Keyboard-in-a-Box; ★★★★★ SmartBoard**
Replacement keyboards compared
- 41 ★★★★★ Infini-D 4.5; ★★★★★ Strata Studio Pro 2.5**
3-D authoring packages compared
- 44 ★★★★★ MacCoach 2.0; ★★★ PowerKey Rebound**
Server-restarting devices compared
- 44 ★★★★★ Conflict Catcher 8**
Extension-management utility
- 46 ★★★½ QX-Tools 4.0**
QuarkXPress plug-ins
- 48 ★★★½ Bullet Drive Express**
Portable hard drive
- 50 ★★ Wootech Voyager Professional Edition**
Web-site manager
- 52 ★★★★★ ArchiCAD 6.0**
CAD software
- 54 ★★★ Mailsmith 1.1**
E-mail client
- 56 ★★ Digital Darkroom 1.5**
Image-editing software
- 58 ★★★★★ FTPForms 2.3**
Internet file-exchange utility
- 60 ★★★★★ LinkUPPP Duo 1.1**
ISDN multichannel PPP client
- 62 ★★★½ WebSentinel 2.0**
Web-security plug-in
- 64 ★★★ AFP Logger**
AppleShare IP logging tool
- 66 ★★★★★ 1999 Grolier Multimedia Encyclopedia—Deluxe Edition**
Reference CD-ROMs

BUY YOUR MAC FROM APPLE
BUY YOUR PRINTER
DIRECT FROM GCC.



HERE'S WHY...

We're GCC Technologies and our printers are sold direct against some of the most famous names in the computer industry. Which creates a buying opportunity for those who understand a basic principle of free enterprise: Selling direct is better for the manufacturer and buying direct is better for the customer.

Therefore, we sell our printers direct, eliminating many prosperous middlemen, and lowering your costs.

We also provide direct technical support, eliminating other middlemen who can't solve your problems. And we are compassionate hand-holders. We offer unlimited free technical support, not just on business days, but on Saturdays too – throughout the one-year warranty period. And if during that period you have a problem that our technical support people can't solve, our Platinum Exchange program guarantees you a replacement printer by the next business day.

We invite you to buy your next printer direct from GCC and join our growing family of satisfied customers. All GCC printers come with an unconditional thirty-day money-back guarantee.

For complete details, call the 800 number below. And for the record, yes, our printers have wonderful technology too. It's just that you don't have to pay extra for it.



ELITE 12 Series

12 pages per minute
1 year Platinum Exchange Warranty
Maximum Print Area 8.5" x 14"
Letter, legal, A4, envelope
250 sheet Universal Tray
PostScript® Level 2 compatible, PCL 5
80 PostScript fonts, 15 PCL fonts
RAM expandable to 64 MB
EtherTalk®, LocalTalk®, TCP/IP
Ethernet (10BaseT), Bi-directional Parallel

2nd Paper Feeder*
(Includes 500 sheet Universal Tray) Add \$299

Extra 8 MB Memory Add \$ 49

\$999 **600 dpi**

Business Lease \$35 Month/36 months

Platinum Exchange Warranty Program
Additional Year Add \$ 99

\$1199 **1200 dpi**

Business Lease \$41 Month/36 months

Platinum Exchange Warranty Program
Additional Year Add \$ 119



ELITE XL 20 Series

20 pages per minute
1 year Platinum Exchange Warranty
Maximum Print Area 12.75" x 35.25"
Ledger, letter, legal, A3, A4, envelope, poster
500 sheet Universal Tray
PostScript® Level 2 compatible, PCL 5
285 PostScript fonts, 15 PCL fonts
RAM expandable to 64 MB
EtherTalk®, LocalTalk®, NetWare™, TCP/IP
Ethernet (10BaseT, AAUI), Bi-directional Parallel

2nd or 3rd Paper Feeder*
(Includes 500 sheet Universal Tray) Add \$299

Extra 8 MB Memory Add \$ 49

\$1799 **600 dpi**

Business Lease \$63 Month/36 months

Platinum Exchange Warranty Program
Additional Year Add \$ 179

\$1999 **800 dpi**

Business Lease \$70 Month/36 months

Platinum Exchange Warranty Program
Additional Year Add \$ 199

\$2199 **1200 dpi**

Business Lease \$75 Month/36 months

Platinum Exchange Warranty Program
Additional Year Add \$ 219



ELITE XL 8 Series

8 pages per minute
1 year Platinum Exchange Warranty
Maximum Print Area 11" x 17"
Ledger, letter, legal, A3, A4, envelope
250 sheet Universal Tray
PostScript® Level 2 compatible, PCL 5
80 PostScript fonts, 15 PCL fonts
RAM expandable to 64 MB
EtherTalk®, LocalTalk®, TCP/IP
Ethernet (10BaseT, 10Base2), Parallel

2nd Paper Feeder*
(Includes 250 sheet Universal Tray) Add \$319
(Includes 500 sheet Universal Tray) Add \$419

Extra 8 MB Memory Add \$ 49

\$1399 **600 dpi**

Business Lease \$48 Month/36 months

Platinum Exchange Warranty Program
Additional Year Add \$ 139

* The Elite 12/600, Elite 1212, and the Elite XL 608LC support one additional paper feeder. The Elite XL 20/600, Elite XL 20/800, and the Elite XL 20/1200 support two additional trays.

GCC Technologies is a registered trademark of GCC Technologies, Inc. Elite 12/600, Elite 1212, Elite XL 608 LC, Elite XL 20/600, Elite XL 20/800 and the Elite XL 20/1200 are trademarks of GCC Technologies, Inc. All other trademarks or registered trademarks are trademarks of their respective companies.

Keycode 812MWS

Choose 43 at www.macworld.com/getinfo

To order call 1-800-422-7777, or visit our web site, www.gcctech.com

AnthroCarts!®

Built like tanks with a Lifetime Warranty!



Educational Discounts • Dozens of Shapes and Sizes
Over 75 Accessories • Tough as Nails • Order Direct!

Call for a free Catalog:

800-325-3841

6:00 AM to 6:00 PM PST, M-F



Anthro Corporation®
Technology Furniture®
Tualatin, OR 97062
Fax: 800-325-0045
Japan: 03 (Tokyo)-3947-2735
www.anthro.com



Since 1984. Prices from \$299. GSA contract. Available for OEM applications.

Macworld

EDITOR IN CHIEF
EXECUTIVE ASSISTANT

Andrew Gore
Cynthia A. McDonald

EDITORIAL

EDITOR Michael Penwarden
SENIOR EDITOR/NEWS AND REVIEWS Stephen Beale
SENIOR EDITOR/DEPARTMENTS Nancy Peterson
SENIOR EDITOR/FEATURES Jason Snell
SENIOR ASSOCIATE EDITORS Allyson Bates,
Linda Comer,
Scholle Sawyer
ASSOCIATE EDITORS Laura Lindhe,
Brooke C. Wheeler
ASSISTANT EDITOR Michael Gowan

CONTRIBUTING EDITORS

David Biedny, Henry Bortman, Christopher Breen, Bruce Fraser, Ted Landau, Deke McClelland, Rik Myslewski, David Pogue, Lon Poole, Franklin N. Tessler

INTERNATIONAL EDITORS

Steven Noble, Australia; Bernard Le Du, France; Andreas Borchert, Germany; Enrico Lotti, Italy; Yoshio Moriya, Japan; Gert-Jan Oelderik, Netherlands; Tomasz Bitner, Poland; Daniel de Blas, Spain; Lennart Håkansson, Sweden; Fred Jame, Taiwan; Bahattin Apak, Turkey; Simon Jary, United Kingdom

LAB

LAB DIRECTOR Jeff Pittelkau
ASSOCIATE LAB DIRECTOR Kristina De Nike
SENIOR LAB ANALYSTS Jeffy K. Milstead,
Kevin Mitchell
ASSOCIATE LAB ANALYST Gil Loyola
INVENTORY COORDINATOR Ulysis Bravo

COPY EDIT

MANAGING EDITOR Claire H. Breen
COPY CHIEF Paul-Michael King
SENIOR COPY EDITORS Elissa Rabellino,
Jon Zobenica

ART AND DESIGN

DESIGN DIRECTOR Eleanor Leishman
ART DIRECTOR Sylvia Chevrier
ASSOCIATE DESIGNERS Martha Katt,
Michael Rattary
DESIGN ASSOCIATES Jackie Goodman,
Jonathan Woolson

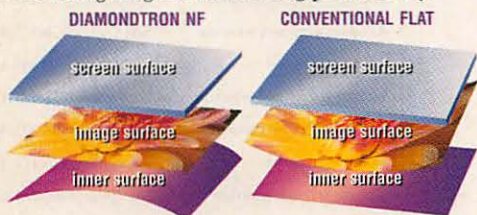
ONLINE

PUBLISHER Jeff Julian
DIRECTOR OF CONTENT Matthew Rothenberg
SENIOR ONLINE EDITOR Philip W. Dyer
CONTENT ENGINEER Jeff Cheney
ASSISTANT CONTENT ENGINEER Jessica Graves
DIRECTOR, BUSINESS DEVELOPMENT FOR ONLINE Nicholas Harvey
ACCOUNT MANAGER Diana Berry

Mitsubishi Is Changing The Face Of Desktop Monitors.

The Finesse Of Flat: Introducing Mitsubishi's Diamond Pro[®] 900u With The Breakthrough DIAMONDTRON NF[™] CRT.

Mitsubishi's new DIAMONDTRON NF (Natural Flat) CRT technology represents an unprecedented improvement in the way you'll look at monitors from this moment on. The revolutionary, truly flat-faced CRT creates distortion-free, intuitively correct images that are much easier on your eyes. Conventional CRTs produce curves and distortions that are hard on your eyes, increasing fatigue and reducing productivity.



You've come to expect crisp, clear images from Mitsubishi's award-winning DIAMONDTRON monitors, and now the innovative Diamond Pro 900u takes monitor performance to an even higher level. The Diamond Pro 900u delivers consistently accurate image quality – side to side, center to corner. In addition, Mitsubishi's patented CRT manufacturing process makes the Diamond Pro 900u stay brighter up to twice as long as conventional CRT designs. First in a family of DIAMONDTRON NF monitors, the 19-inch (18.0-inch DVI*) Diamond Pro 900u has a maximum resolution of 1600 x 1200/75 Hz. For added flexibility it also features a self-powered USB hub that two independent computers may share the display and a single set of USB devices. DIAMONDTRON NF monitors are just flat-out better. For more information contact Mitsubishi Electronics today.

USA: 800-843-2515 • Canada: 800-387-9630
QWIKFAX: 800-937-2094
www.mitsubishi-display.com/pb/mwd/900u



©1998 Mitsubishi Electronics America, Inc. DIAMONDTRON NF is a trademark of Mitsubishi Electric Corporation. Microsoft, Windows and the Windows logo are registered trademarks of Microsoft Corporation. Mac and the Mac OS logo are trademarks of Apple Computer, Inc. *DVI (Diagonal Viewable Image)



 **MITSUBISHI**
DISPLAY PRODUCTS

Innovation On Displaysm

Choose 261 at www.macworld.com/getinfo

Schedule Today. Succeed Tomorrow.



The Right Choice for Easy Project Scheduling.

Why waste time struggling with complicated project management or spreadsheet programs? FastTrack Schedule 5.02 is easy to use, intuitive, and extremely flexible. So whether you need to plan a day's worth of activities or a year's worth of projects, you'll stay organized and achieve project goals.

FastTrack Schedule has the tools to track and revise progress and costs as changes occur — even link activities to establish dependencies. Add your schedules to proposals, reports, or use the web publishing features to turn your schedules into HTML tables or web graphics. FastTrack Schedule is also available for Windows 3.1/95/NT*, so everyone in your office can stay on schedule.

FastTrack Schedule



NEW Version 5.02

For information or to order, call

(800) 450-1982

Download a **FREE DEMO** today!
www.aecsoft.com



Macworld, Dec. 97 MacWEEK, Oct. 97 Macworld, UK, Dec. 97 MacUser, UK, Nov. 97

Choose 230 at www.macworld.com/getinfo

Macworld

PRESIDENT AND CEO	Colin Crawford
ASSISTANT TO THE CEO	Sharon Sanderson
CHIEF FINANCIAL OFFICER	Stephen Daniels
BUSINESS MANAGER	Eos de Feminis
ACCOUNTING COORDINATOR	Ronda Bittner
IT ASSISTANT	Christian Semmel
DIRECTOR OF HUMAN RESOURCES	Sue Murphy
HUMAN RESOURCES COORDINATOR	Ada Yim

DISPLAY ADVERTISING SALES

VICE PRESIDENT, SALES, & PUBLISHER	Matt Sweeney
ASSOCIATE PUBLISHER	Steve Plevin (415/243-3509)
SALES COORDINATOR	Karla Kyrias (415/278-8542)
SALES ASSISTANT	Bryan Farnsworth (415/243-3577)
NATIONAL ACCOUNTS MANAGER	Liz Pabón (415/243-3584)
REGIONAL ACCOUNT MANAGER	Jessica Ross (415/243-3583)
NATIONAL ACCOUNTS MANAGER	Sara Culley (970/327-4499)
ACCOUNT EXECUTIVE	Margaret Level Green (415/243-3582)
EASTERN ADVERTISING DIRECTOR	Cynthia Ramsey (973/243-1197)
NATIONAL ACCOUNTS MANAGER	Paul Bonarrigo (508/533-4020)
ACCOUNT EXECUTIVE	Jo Zottarelli (516/277-4134)
SHOPPER ACCOUNT MANAGER	Niki Stranz (415/243-3664)
SHOPPER ACCOUNT MANAGER	Carol Johnstone (415/243-3691)

RESEARCH

SENIOR RESEARCH ANALYST	Phillip Hibbert
-------------------------	-----------------

MARKETING

VICE PRESIDENT, MARKETING	Vickie Welch
MARKETING MANAGER	Francesca Koe
TRADE SHOW/EVENTS COORDINATOR	Nancy Galanty

MACWORLD GLOBAL PRODUCT SUPPORT CENTER

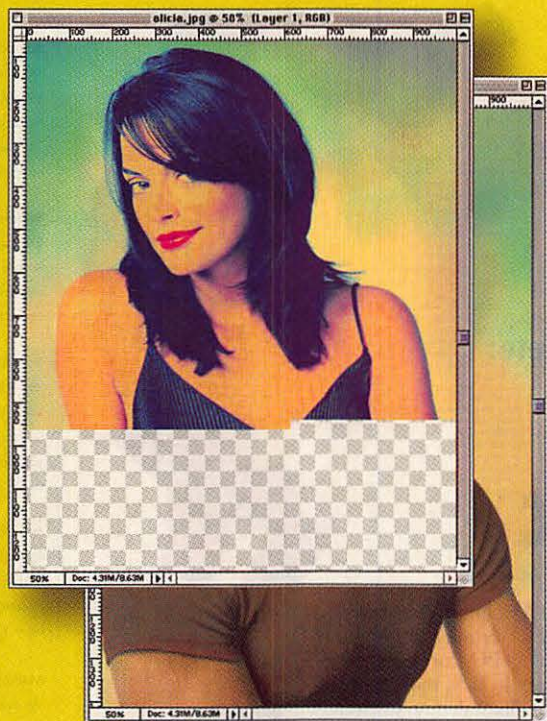
COORDINATOR	Sharon Sanderson (415/243-3640)
-------------	---------------------------------

PRODUCTION

VICE PRESIDENT OF MANUFACTURING	Anne Foley
PRODUCTION DIRECTOR	Cynthia Neustadt
MANUFACTURING TECHNICAL DIRECTOR	Clayton Haberman
DIGITAL AD COORDINATOR	Mac Scott
AD SALES COORDINATOR	Rick Sandoval

Macworld is a publication of Mac Publishing, L.L.C. Macworld is an independent journal not affiliated with Apple Computer, Inc. Macworld, MacUser, MacWeek, Macworld Interactive, Macworld Shopper, MW, MW Lab, MW Shopper, The Desktop Critic, Expert Graphics, Quick Tips, Star Ratings, Buyers' Tools, Streetwise Shopper, and Conspicuous Consumer are registered trademarks of Mac Publishing, L.L.C. Apple, the Apple logo, Mac, and Macintosh are registered trademarks, and MacLetter and PowerBook are trademarks, of Apple Computer, Inc. Printed in the United States of America. Copyright © 1998 Mac Publishing, L.L.C. All rights reserved.

By the time other
graphics accelerators have
finished showing you her...



IXMICRO™ has introduced you to her 6'5", 265 lb. boyfriend.

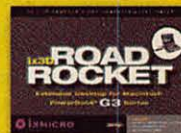
When you have a faster graphics accelerator, you can save yourself a lot of time and trouble. **ix3D™** — the #1 selling graphics board for the Mac. These 128-bit boards are the ultimate in resolution and pure performance, from the makers of TwinTurbo®. And unlike her, ix3D is available. **Now.**

Ultimate Rez — for graphic experts demanding high performance at extreme resolutions - ideal for 19- to 24-inch monitors

Pro Rez — for graphics professionals operating at moderately high resolutions - ideal for 17- to 19-inch monitors

Mac Rocket — for home and small office and budget-minded graphics professionals - ideal for 14- to 17-inch monitors

Road Rocket — Extended desktop for users of the new Macintosh Powerbook G3 Series



AVAILABLE AT

COMPUSA
THE COMPUTER SUPERSTORE

MacMall

MacWAREHOUSE

the Mac Zone

MICRO CENTER
THE COMPUTER DEPARTMENT STORE

1.888.467.8282

Choose 53 at www.macworld.com/getinfo



IXMICRO™
WWW.IXMICRO.COM



©1998 IXMICRO. TwinTurbo is a registered trademark of IXMICRO. All rights reserved. All other product and company names are property of their respective owners.

STEP UP TO HARDWARE

Windows® Compatibility

Virtual PC™, SoftWindows®,
or Apple®/Reply Card†
Upgrade to OrangePC:

\$399*

OrangePC 620 Complete:

\$549

OrangePC®
Windows® Compatibility Card

Our new OrangePC 620 is the best priced Macintosh Windows® 95/98 compatibility card in history. Virtual PC™ and SoftWindows® users can upgrade to OrangePC for only \$399, experiencing a giant step up in performance. In fact, the OrangePC benchmarks** four to twenty times faster than sleepy software emulators.

The OrangePC 620 answers the "price/performance" question by offering true hardware speed at a breakthrough price that every Mac user can afford! It actually has a Pentium® compatible 200MHz processor (user upgradeable to 300MHz) with 16MB of real RAM (user upgradeable to 128MB) on board. This means you can run any PC application on your Mac as fast as a real PC with the ultimate in compatibility.

And the OrangePC's Version 3 software has significant improvements as well. It sports 32-bit drivers facilitating CD-ROM long file names and NDIS3 networking. Our exclusive SnapShot™ feature allows a Windows screen to show the Mac environment inside a Win 95 window and conversely, the Mac screen to display the Windows environment. It's like a "picture in picture" on your TV!

So take a step in the right direction - upgrade your software emulator to real hardware for only \$399, or buy the OrangePC outright for \$549.

*Available through MacPowerhaus and Orange Micro, Inc.

**Benchmark data: Business Winstone 98; Power Mac G3 with 64MB, Virtual PC™ 2.0 vs OrangePC 620, 6X86MPR200, 32MB, Virtual PC™, OrangePC, and Windows® 95 are trademarks or registered trademarks of Connectix Corporation, Orange Micro, Inc., and Microsoft. © Orange Micro, Inc. 1998

Choose 33 at www.macworld.com/getinfo



◆◆◆◆ MacWEEK
MacWeek Magazine May 1998

Now Available From:

MacPowerhaus
"The Cross-Platform Connection"
(800) 615-3183

MICRO CENTER
THE COMPUTER DEPARTMENT STORE

Orange Micro inc.
"18 Years of Innovation and Excellence"

1400 N. Lakeview Ave., Anaheim, CA 92807
(714) 779-2772 www.orangemicro.com

†Must have OEM version of Windows 95

Macworld

HOW TO CONTACT MACWORLD

Subscription Services

Phone 303/665-8930, United States only
303/604-7445, outside the United States
U.S. Mail Macworld Subscription Services
P.O. Box 54529, Boulder, CO 80322-4529
World Wide Web www.zdnet.com/zdsubs/macworld/service

Subscription Rates

The one-year (12-issue) subscription rate is \$34.97 in the United States and \$54.97 in Canada and Mexico; for all other countries, send either \$54.97 for surface mail or \$104.97 for air mail. The two-year U.S. rate is \$59.97, and the three-year rate is \$79.97. Checks must be made payable in U.S. currency to Macworld. Please allow 6 to 8 weeks to receive your first issue.

Back Issues of Macworld

Back issues (subject to availability) are \$8 per issue for U.S. delivery (\$12 outside the United States); prepayment in U.S. currency to Macworld is required. Send check or money order to Back Issues Department, Ziff-Davis Inc., P.O. Box 53131, Boulder, CO 80322-3131.

Reprints and Permissions

You must have permission before reproducing any material from Macworld. Write to Macworld, Reprints and Permissions, 301 Howard St., 16th Fl., San Francisco, CA 94105; include a phone number. To order reprints of your company's editorial coverage, call Reprint Services at 800/217-7874 or 651/582-3800; fax 651/633-1862.

Newsstand CD-ROM

Readers can obtain newsstand CD-ROMs by mailing a check for \$3.95 (includes shipping and handling) for each CD to Macworld SCS, 301 Howard St., 15th Fl., San Francisco, CA 94105. Please state CD title and issue. Make sure to include shipping name and mailing address.

Mailing Lists

We periodically make lists of our customers available to mailers of goods and services that may interest you. If you do not wish to receive such mailings, please write to us and include a copy of your mailing label.

Macworld on Microfilm

Macworld is available on microfilm and microfiche from UMI, 300 N. Zeeb Rd., Ann Arbor, MI 48106-1346; 313/761-4700.

Macworld Editorial

The editors of Macworld welcome your tips, compliments, or complaints. Stories and product reviews from past issues can be located at www.macworld.com. We are unfortunately unable to look up stories from past issues; recommend products; or diagnose your Macintosh problems by phone, e-mail, or fax. Contact Apple toll-free at 800/538-9696, ext. 500, for information on user groups in your area.

Our offices are located at 301 Howard St., 16th Fl., San Francisco, CA 94105; 415/243-0505, fax 415/442-0766.

LETTERS TO THE EDITOR Direct all comments and suggestions regarding any aspect of the magazine to letters@macworld.com. Due to the high volume of mail received, we can't respond personally to each letter. We reserve the right to edit all submissions. All letters published in Macworld or Macworld Online become the property of Macworld.

QUICK TIPS Send your questions or tips on how to use Mac computers, peripherals, or software to Macworld, Quick Tips, 301 Howard St., 16th Fl., San Francisco, CA 94105; fax 415/442-0766; e-mail quicktips@macworld.com. Please include your name, address, and telephone number.





America Demands Digital Color For Everyone

Fiery Driven is a trademark of Electronics for Imaging, Inc. © 1998 Ricoh Corporation

Affordable Digital Color. For Every Company. Every Department.

From \$11,500

Aficio Color™

**A complete range
of digital solutions**



Brilliant digital color every office can afford. Spectacular presentations every time. Experience the productivity of smart digital features for thousands less. Ask for a demo of the most affordable, fully featured, fully connectable digital color systems in the U.S. For more details, call 800 63 RICOH. Online www.ricoh-usa.com



RICOH®
Image Communication

Choose 4 at www.macworld.com/getinfo

A GRAPHICS REVOLUTION

Canvas 6 redefines the creative process by liberating you from the burden of multiple applications. It's a new way of thinking, a new way of working — a revolutionary concept in graphics software: the Single Creative Application.

Discover the remarkable power of SpriteLayer™ technology. Seamlessly blend vector drawings, scanned photographs, and text with endless opacity control. Layer and composite graphics without limits. From simple brush strokes, to fades, vignettes, and transparent brush strokes, SpriteLayers lets you do it all — to any type of object.

With hundreds of new features and enhancements, Canvas 6 lets you explore new frontiers in graphic design, technical illustration, and visual communication.

Seize the power. Get Canvas 6 today, and experience SpriteLayer technology for yourself. We guarantee it'll revolutionize the way you think about graphics.

The graphics revolution is here. And it begins with Canvas 6.

Includes:
30,000
Clip Art
Illustrations!
2,450
URW™ Fonts!



Estimated
Street Price **\$375**
Competitive
Upgrade **\$199**



www.deneba.com

IS HERE.

REVOLUTIONARY FEATURES

New Technology Exclusive SpriteLayer™ technology gives you complete transparency control over any object: vector, text, or bitmap. • Opacity, gradient, and pixel mask transparency controls with 9 transfer modes. • **Illustration** Precision Bézier and freehand curve editing tools. • Full vector object support for SpriteLayer technology – an industry first. • Powerful Boolean combinations can trim lines, add, subtract, punch, crop, outline, slice and mix any number of vector objects. • New freeform knife tool slices through any vector pages and group instantly. • Document can be as large as 38.5" x 38.5" with multiple pages and unlimited layers. • Precision to 0.5 microns: 17 dimensioning tools, fractional magnification from 3.1% to 3,200%, and arrows for diagramming. • Supports RGB, HSL, CMYK, PANTONE®, Toyo and TruMatch™ colors; custom hatches, gradients, object-based symbols and high-res textures. • Custom snap-to grids, guides, and guide objects, plus SmartMouse alignment aid, for fast and precise drawing control. • New CAD-inspired tools and shortcuts: 3-point arcs and circles, precise corner rounding, offset paths, stars, polygons, grids, spirals, shadows and more. • **Photo Editing** Complete set of anti-aliased pressure-sensitive painting tools, filters and effects. • SpriteLayer technology delivers dynamic layering and photo compositing with 256 levels of opacity, 5 types of vector masks, editable 8-bit pixel masks, and 9 transfer modes. • Up to 24 image channels for saving multiple selections. • Over 30 new built-in image effects filters and support for third-party Photoshop™-compatible plug-in filters and acquire modules. • Color correction controls for brightness, contrast, color balance and equalization, hue/saturation, levels, curves and more. • Support for all scanners, digital cameras, and TWAIN-compatible devices. • **Page Layout & Typography** Professional page design tools: multiple master pages; unlimited shared layers; multiple column sections; adjustable repel settings; linked text columns; headers and footers; text on a path; text wrapping and more. • Complete typographic controls: precision leading and kerning; widow and orphan controls and more. • Text always remains editable, even search and replace; hyphenation; vertical justification; widow and orphan controls and more. • Zoom and pan Colada web pages in a web browser with sound and transitions. • **Internet Publishing** Support for anti-aliased GIF, JPEG, and PNG images for web graphics. • Colada™ technology converts any Canvas document to a web page or web site instantly. • Text always remains editable, even with complex fills, borders, and backgrounds. • Animations, roll-over buttons and sounds can be added to your Colada web pages. • Onscreen slide shows with sound and keyboard shortcuts for frequently used menu commands, tools, inks, strokes, object styles and type styles. • Exclusive Docking bar gives instant access to all palettes. • Unlimited levels of undo. • Integrated virtual memory lets you work on large files with minimal memory. • **Import/Export Capabilities** Direct support for Illustrator, Photoshop (including layers), PDF, EPS, CoreDraw, TIFF, DCS, GIF, PNG, JPEG, Kodak PhotoCD, PICT, QuickTime, CGM, DXF, IGS, HPGL, TARGA, WPG, BMP, PCK, DCX, WMF, TXT, RTF, XTND, and more. • **Professional Output** Support for process and spot color separations with controls for gamut warning, trapping, overprint, and out of gamut previews as you work. • Collect for Output checks for problems and transfers files and fonts to one folder automatically. • Interactive trapping, overprint, and out of gamut previews as you work.



CANVAS 6™

SPECIAL LIMITED-TIME UPGRADE OFFER DIRECT FROM DENEBA!
Upgrade to Canvas 6 before December 31, 1998, and save up to \$100!
 Get **Canvas 6** and the **NEW** 2-hour how-to training video set for only \$159.⁹⁵,
 or upgrade to Canvas 6 alone for the special introductory price of \$129.⁹⁵*.
CALL 1.800.6CANVAS AND ORDER TODAY!



*Plus Shipping & Handling. Offer expires December 31, 1998, while supplies last. Regular upgrade price \$179.95. 2-hour video set \$79.95.
 ©Copyright 1998 Deneba Software. All other trademarks are the property of their respective owners. Limited time offer valid only in North America.

Choose 57 at www.macworld.com/getinfo

Our quality and craftsmanship haven't won a single award.

**Take Home The Professional's Choice:
The ViewSonic PT771.**

ViewSonic® proudly presents the latest member of our award-winning family, the PT771 Professional Series SonicTron® monitor. This 17" (16.0" viewable) monitor is tailor-made for professionals who require the excellent quality, high resolutions and superb performance that ViewSonic delivers.

They've won 400.

Model	ViewSonic PT771	Sony 200ES	Sony 200GS	Sony 200PS
CRT Size/Viewable	17"/16.0"	17"/16.0"	17"/16.0"	17"/16.0"
Aperture Grille Pitch	0.25AG	0.25AG	0.25AG	0.25AG
Maximum Resolution	1,600 x 1,280	1,280 x 1,024	1,600 x 1,200	1,600 x 1,280
Horizontal scanning Freq.	30-92 kHz	30-70 kHz	30-85 kHz	30-92 kHz
Vertical Scanning Freq.	50-160 Hz	50-120 Hz	50-120 Hz	48-160 Hz
Warranty	3 year CRT parts & labor	1 year CRT parts & labor	3 year CRT parts & labor	3 year CRT parts & labor
Low Radiation	TCO '95	MPRII	MPRII	TCO '92

Quality and Craftsmanship.

ViewSonic is acclaimed for its quality, and the PT771 is a fine example. It has an ultra-fine, 0.25mm aperture grille pitch, sophisticated SonicTron technology that delivers clear, crisp images, and a SuperContrast™ screen for brilliant, bold colors. The PT771 also offers a super fast 86Hz refresh rate at a 1,280 x 1,024 resolution, OnView® controls for fast, push-button screen adjustments and Plug & Play which supports easy installation under Windows® 95 and 98. Ask for the better monitor at the better price. ViewSonic, the leader in quality and craftsmanship.

And that's not just one opinion. It's 400.

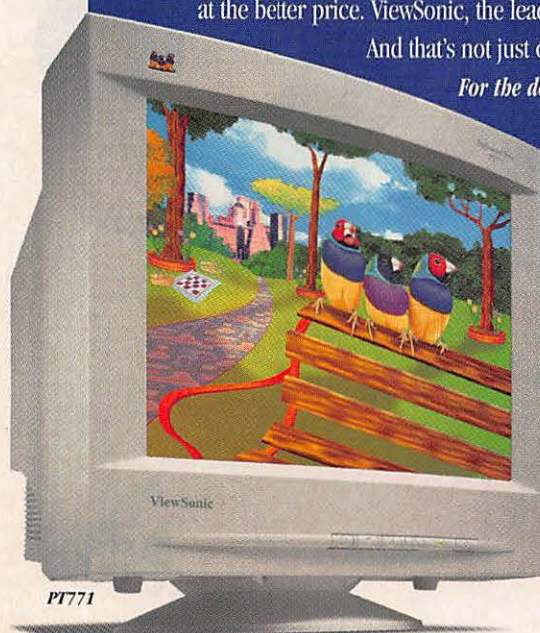
For the dealer nearest you, call

ViewSonic at (800) 888-8583

and ask for agent 81345, or

visit our website at:

www.viewsonic.com/mac.



PT771

Beyond Brilliant.



GS771
March 1998



G810
January 1997



PT813
January 1998

Choose 59 at www.macworld.com/getinfo

(800) 869-7976 Fax: (800) 869-7958 Internet: www.viewsonic.com
Specifications subject to change without notice. • Copyright © 1998 ViewSonic Corporation, all rights reserved. • Corporate names and trademarks are the property of their respective companies.



ViewSonic®
See The Difference!™

DECEMBER 1998

Letters

Working Through Guilt

DAVID POGUE SHOULD KNOW that he's not the only one trapped in a love/hate relationship with Microsoft (*The Desktop Critic*, September 1998). I too have been converted by Internet Explorer 4's top-notch interface. In fact, as I read his article on Macworld Online, I stumbled upon yet another nice touch: as long as you're not in a text field, pressing the spacebar will page down and option-spacebar will page up.

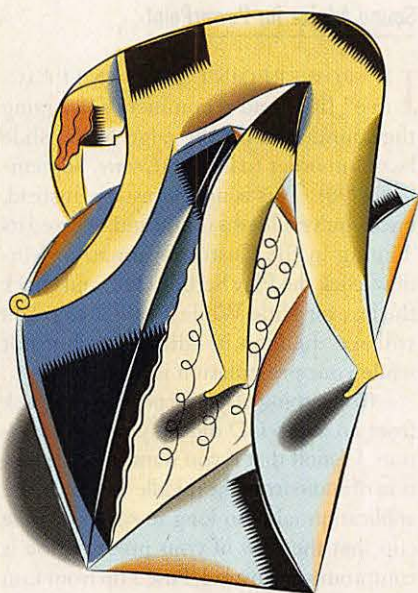
JAMES MUSPRATT
West Roxbury, Massachusetts

UPON READING DAVID POGUE'S confessional column where he, like other Mac users, shamefully admitted the benefits of a Microsoft product, I decided to swallow my Netscape pride and try out Internet Explorer 4.01. After wasting an evening downloading the 12.4MB file and spending over an hour trying to open a Web page, only to have the program crash my Mac each time, I've decided that if anyone should feel guilty, it's Microsoft.

MARK CICHRA
Independence, Ohio

PowerBooks in Europe

TED LANDAU'S "ONLINE ON THE Road" (*Secrets*, September 1998) was a good discussion of what you need to think about when computing while traveling. But he states in the sidebar "Go Mobile, International-Style" that U.S. Mac users will have trouble using their PowerBook AC adapters in Europe, due to voltage differences. Not true—PowerBook AC adapters can use all voltages from 90 to 240 volts and line frequencies of 50Hz to 60Hz, thus covering all the European AC



systems. However, you will need a simple plug adapter, available at utility stores in many airports for around \$10.

JON AALBORG
Oslo, Norway

The Ongoing Slot Controversy

ANDREW GORE GOT IT EXACTLY right in pointing out Apple's misstep in dropping down to three slots in the high-end G3 machines (*The Vision Thing*, September 1998). My base configurations use a minimum of four PCI slots: two video cards, one ultrawide SCSI card, and a 100BaseT Ethernet card. This is a very common and necessary configuration in content creation as well as prepress. I'm anxiously waiting for the next-generation designs, and I hope that in the short term, my souped-up Umax S900's will hang tough.

JOHN STILL
Boston, Massachusetts

I'M BEMUSED BY ALL THE BLEATING from digital-video and other high-end-graphics professionals about the lack of six-slot G3's—especially when they complain about the expense or inconvenience of an external PCI chassis. Excuse me? This 1 or 2 percent of Apple's market, who supposedly have dollars to burn and would allegedly contribute so much to Apple's bottom line—they haven't got the money for an expansion chassis? Would they, if it came down to the crunch, rather change platforms—with the corresponding loss in productivity from retraining, the purchase of all new software, and increased IS needs—than buy and use an expansion chassis at a minute fraction of the cost? I don't get what all the fuss is about.

CHUAN CHEW
Sydney, New South Wales, Australia

Peeved about Premiere 5.0

JIM HEID IGNORED THE FACT that Adobe has chosen to remove a major speed enhancement from Premiere (*Reviews*, September 1998). Premiere 5.0 does not use its preview files when building final movies—which effectively doubles rendering time for video that has to be compiled.

Furthermore, he ignores Premiere's interface downgrade. Version 5.0's window adjustability is more limited, hindering interface customization. The Commands window no longer offers color coding or column-orientation options. The Controller is now locked to the Preview screen and is too large and cumbersome even at its smallest setting.

The most staggering omission of all is one I discovered in the first ten minutes

continues

CORRECTIONS

- *Freddie Fish is a she, and her friend's name is Luther, not Norman* ("Back-to-School Guide," Reviews, September 1998).
- *YankPro 2.0* (Reviews, October 1998) is from Maui Software (831/689-9314, www.mauisoftware.com).
- *Ambrosia Software's URL is www.ambrosiasw.com* ("Escape Velocity: Override," Reviews, October 1998).
- *Epson's PhotoPC 700 has a list price of \$699 and requires NiMH batteries* ("Focus On," October 1998).

of operation: all transitions render three to five times slower than in version 4.2.X. Add this rendering slowdown to 5.0's inability to utilize preview files, and I can't even calculate the overall addition of hours to a project.

JOE AMADEO
Pleasant Hill, California

Yes, it's true that *Premiere 5.0* doesn't use preview files; this is caused by a bug that will be fixed in a maintenance release that Adobe plans to ship before the end of the year. As for the Controller, you can unlock it from the Monitor window by clicking on the collapse button. Beyond that, *Premiere 5.0's* interface is greatly improved over earlier versions'. The ability to hide and collapse audio and video tracks, the fast-editing convenience of the new Monitor window, and the new Navigator window—these are all terrific, timesaving enhancements. Spend some time learning the new interface, and I'm sure you'll find it preferable to 4.2's. *Premiere 5.0* is indeed, however, often noticeably slower than 4.2, as the review pointed out. Adobe claims that the maintenance update will address these performance problems.—Jim Heid

Tip Troubles

I ENCOUNTERED SOME PROBLEMS with tip number 16, "High-Powered Launcher" (*Macworld's* Top Tips," September 1998). When the Recent Documents folder is moved out of the Apple Menu Items folder, it is immediately replaced by the system. The folder moved to the Launcher Items folder is a non-updating list of the items used at the time

the move was made. This is, obviously, not helpful. Is this tip Mac OS 8-dependent? It sure doesn't work in 7.6.

D. B. AULD
Coventry, Rhode Island

Mea culpa. You're right—this tip did work, and now, bizarrely, it doesn't. Allow me to atone by offering up an entire Web page of extremely dazzling tips and tricks, all of which actually work. They're at www.macworld.com/more/.—David Pogue

Sound Advice for PowerPoint

IN "POWERPOINT GOES INTERACTIVE" Jim Heid recommends dragging the sound icon off the edge of the slide layout in order to hide it (*Create*, September 1998). This is not necessary. Instead, once you've added a sound and selected its Timing in the Custom Animation window, click the Play Settings tab, and check the box for Hide While Not Playing. You still see the icon in edit mode, but not while your presentation is playing.

Concerning playing a portion of a track from an audio CD during your presentation, I found that if you want to add a section of audio from the middle of a track, the application takes so long to search for the clip that the flow of your presentation is compromised. Instead, I use a tip from Lon Poole's book *Mac OS 8 Bible* for adding audio-only QuickTime movies. This still adds to your file size, but a 1-minute, 16-bit stereo clip adds only 10.1MB to your presentation, versus 47.1MB for the 4:40 track from which I selected the clip.

ALICIA CHASE
Cadyville, New York

You're correct about my sound-icon tip—this was a necessary technique for the beta version of Microsoft PowerPoint 98, but the final shipping version has the handy Hide While Not Playing check box. As for sound-only QuickTime movies, they are certainly a viable option. Of course, you can also avoid slow performance when taking the audio-CD route if you play tracks only from the beginning.—Jim Heid

Wanting More on Linux

ALTHOUGH YOUR REVIEW OF Tenon's Power MachTen was informative, it implied that MachTen was the only Unix environment available for the

Power Macintosh (*Reviews*, September 1998). Not one, but *two*, versions of Linux have been available for the Power Mac for some time now: MkLinux, the microkernel version, and LinuxPPC, the monolithic-kernel version. Both have brand-spanking-new releases (check out www.mklinux.apple.com and www.linuxppc.org). And unlike MachTen, both are free—with their source code freely available. Yet nary a peep about either Linux has emerged from *Macworld*. What gives? An in-depth look from you guys on these rock-solid alternative operating systems is way overdue.

DAN CAUGHERTY
Research Triangle Park, North Carolina

Web-Server Dissension

I DISAGREE WITH THE COMMENTS and ratings you gave to WebTen and Quid Pro Quo Plus (QPQ) server software (*Reviews*, September 1998). I've tried to install three successive versions of WebTen on my server, and none worked within a reasonable amount of troubleshooting time. On the other hand, QPQ took two minutes to install. I also wonder how you came up with QPQ's lousy performance in your benchmark. I gave QPQ 20MB of RAM and a 10MB cache, set the Tasking Time and Sleep Time to Best Performance (in QPQ's Global Settings), and left QPQ as the front-running application on the server (QPQ is substantially slower when running in the background). And I got great performance—certainly much better than that of Apple's Personal Web Sharing. The server is stable and user-friendly—and the regular version of QPQ is free. I would recommend QPQ over its competitors for all but the largest Web-site applications. But you are right about QPQ's support—it stinks. The good thing is, you don't need it.

ETIENNE DOUAZE
Singapore

Letters should be sent to *Letters*, Macworld, 301 Howard St., 16th Fl., San Francisco, CA 94105; via fax, 415/442-0766; or electronically via CompuServe (70370,702), MCI Mail (294-8078), AppleLink (Macworld1), or the Internet (letters@macworld.com). Include a return address and a daytime phone number. Due to the high volume of mail received, we can't respond personally to each letter. We reserve the right to edit all letters. All published letters become the property of *Macworld*. **m**



Sometimes Newer Is Better Than New.



Introducing the Latest Apple G3.

Want G3 power for your trusty old Power Mac? Simply plug in a Newer Technology MAXpowr™ G3 processor upgrade card, and for a fraction of the cost of a new machine, your old Mac will go toe to toe with Apple's new G3 models. A MAXpowr card is easy to install, and it's available for most Power Macs and clones. So, order a Newer Technology MAXpowr G3 card today, and breathe new life into your older Mac.



To learn how to beef up your Mac, visit us at www.newertech.com

Choose 55 at www.macworld.com/getinfo

 Think different.™

Need it
tomorrow?



Order as late as
2:45 a.m. ET
(that's in the morning)
and still get
delivery next day!

Need it
installed?



We'll do it FREE!

When you purchase a new
Macintosh from us, we will
configure it for you at no
additional charge.

Visit Our
New Website!

www.macconnection.com

- Secure Online Ordering
- Powerful Search Tools




MacConnection
The Original Macintosh
Mail-Order Source!

NASDAQ
TRADED COMPANY
TICKER
SYMBOL: **PCCC**

New Ideas for a

Apple® and MacConnection®

Apple®
Pushing
the Limits
of Technology.

INCLUDES AN
**ADDITIONAL
32MB RAM
INSTALLED FREE!**

**Only
\$1299**
104490

Apple ignited the personal computer
revolution in the 1970s with the Apple II, rein-
vented the personal computer in the 1980s with
the Macintosh, and is re-defining the personal com-
puter for the 1990s with the highly successful G3 series
and the new iMac. And the innovation continues with tech-
nologies such as QuickTime, which makes video, sound, music,
3D and virtual reality come alive on both Macs and PCs.



MacConnection®
Setting the Standard then... and Now!

A pioneer in the direct marketing business, MacConnection introduced services that are now standard throughout the industry. Innovations such as overnight delivery, toll-free technical support, One-Minute Mail Order and late-night ordering for next day delivery were unheard of before MacConnection introduced these services.

And the innovation continues with our
Extended Service Plan, free custom
configuration and online services
such as Smart Selectors.


Authorized
Catalog Reseller
and Service Provider



800-600-9417

OVER 20,000 HOT PRODUCTS 24 HRS A DAY!

New Millennium.

iMac



"...a clean and exciting break with the past."

BUSINESSWEEK 9/7/98

The Supersonic G3

Apple has refreshed its incredibly successful Power Mac G3 series with five new models, including a blazing-fast 333MHz G3 minitower, which promises to be the fastest Power Mac ever. Like all G3 models, it leaves Pentium-based machines in the dust and delivers hot new technologies like backside cache, expanded memory capabilities and support for FireWire, Apple's latest video innovation.



Choose a Winning Team.

When you purchase your new iMac, Power Mac G3 or PowerBook G3 from MacConnection, we'll back it up with the friendly, personalized service and support we pioneered! Plus, we'll custom-configure your new Mac for free and still deliver overnight! So don't wait any longer! Call MacConnection today and order your new Mac!



Power Macintosh® G3

PowerPC 333MHz G3 processor
128MB RAM (Max. 768)
9GB Ultra/Wide SCSI HD
6MB SGRAM
24X CD-ROM
101744

Only \$2999

Macintosh® PowerBook G3

PowerPC 300MHz G3 processor
FREE VST 100MB Zip drive (14.1" only)
64MB RAM (Max. 192)
8GB HD
DVD-Video
10BT/56K Modem
14.1" TFT Active Matrix Display
104252 **\$4999**



Mac OS 8.5 The Fastest, Smartest Yet!



New Sherlock Find technology, a superior Internet experience, native AppleScript, and the fastest networking available make

Mac OS 8.5 the best Mac OS yet! Call and order today!

FireWire Heats Up.

Apple's innovative cross-platform technologies have a new addition. FireWire is a serial data bus that can transfer huge amounts of real-time digital data from consumer electronics devices like video camcorders into Macs and PCs. And because it moves data at rates of 100, 200, and 400Mbps, you can transfer data into your Mac as a pure digital signal. FireWire is available for your new Power Mac G3 as an option (#60331). Call us for more details.

**ORDER
ONLINE!**

**CALL
or CLICK™**

www.macconnection.com

**24 HOURS
7 DAYS A WEEK!**



MacConnection®

The Original Macintosh Mail-Order Source—Since 1984!

1298MW

Need Info?



On cables, RAM, or connecting a modem or scanner or digital camera to your Mac?

We offer toll-free technical support on everything we sell.

FREE Catalog! Guaranteed Low Prices!

Great products from Apple, Adobe, Newer Technology, Microsoft, Iomega and more. Call or visit our website to request our catalog.



iMac

Say Hello to iMac.

The Mac Everyone Wants!

Only \$1299 104490

It may look cool, but it sure is hot! The iMac is the most anticipated computer of the 1990s, and it's flying off our shelves! That's because it delivers everything you need for stress-free computing, including blazing 233MHz G3 speeds, all-in-one convenience and easy Internet access, all at an incredibly low price! Find out for yourself what all the buzz is about. Order your iMac today!

233MHz G3
15" Display (13.1" viewable)
32MB SDRAM 128 Max.
4GB IDE Hard Drive
24X CD-ROM
Built-in 56Kbps Modem and 10/100BT Ethernet
• 512K Backside Cache
• Two 12Mbps USB Ports
• Built-in SRS Stereo Speakers
• Two Headphone Jacks

*LIMITED TIME OFFER. While supplies last.



FREE!
32MB RAM

INSTALLED FREE!
Ask for #104490*



CyberPatrol
The safest way for your kids to surf the net!

The Learning Company



Compton's Encyclopedia
Complete 26-volume encyclopedia on CD!

The Learning Company

ACCESSORIES
Apple

56129	PowerBook G3 AC Adapters.....	\$79
56131	Lithium-Ion Rechargeable Battery.....	\$29
56133	G3 Floppy Disk Drive Expansion Bay Module.....	\$109
35931	1400 NiMH Battery.....	\$135.95
38465	3400 Lithium Ion Battery.....	\$199.95
16033	PowerBook 500 Battery.....	\$125.95
35928	PowerBook AC Adapter 1400, 2400, 3400.....	\$49.95
35929	PowerBook 1400 Video Out.....	\$149.95

CARRYING CASES
Targus

7369	Targus NotePac (Black).....	\$39.95
31084	Targus NotePac Plus.....	\$59.95
1305	Universal Notebook Case (Black).....	\$69.95
29851	Universal Deluxe Carrying Case.....	\$129.95
56460	Air Universal w/FREE Fanny Pack.....	\$99.95
41412	Digital Camera Case-Nylon.....	\$39.95
48238	PDA/Handheld Leather Wallet.....	\$39.95
48239	PDA/Handheld Leather Double Wallet.....	\$59.95
48243	Full-Size Leather Portfolio.....	\$99.95

Kensington

10410	Kensington Deluxe Computer Carrying Case.....	\$54.95
7060	MicroSaver Security Cable System.....	\$39.95
48823	Sky Runner Nylon Carrying Case.....	\$69.95
35526	Saddle Bag Black w/Black Trim.....	\$89.95

33443	Saddle Bag Black w/Brown Trim.....	\$89.95
9585	Executive Computer Case.....	\$99.95

DATA STORAGE
Iomega

102640	100MB Zip Drive - SCSI Ext.....	\$119.95
44384	Zip Disk 10-Pack Gig O Color.....	\$99.95
47077	Jaz 2GB External Drive.....	\$399.95
47082	Jaz 2GB 3-Disk Pack.....	\$299.95
50564	ZipPlus w/FREE Carrying Case.....	\$169.95
46089	Zip Drive SCSI Insider w/FREE Zip Zoom.....	\$119.95

La Cie

59543	9.1GB HD Internal.....	\$529
59542	9.1GB HD External.....	\$629
58080	24X External CD-ROM Drive.....	\$129
59402	4.0GB Apple Ext. Hard Drive.....	\$419
58081	External 2x8 Recordable Drive.....	\$419

Quantum

50871	2.1GB Fireball SE Ultra SCSI Int HD.....	\$219
50869	4.3GB Fireball SE Ultra SCSI Int HD.....	\$289
50867	8.4GB Fireball SE Ultra SCSI Int HD.....	\$489

SyQuest

48040	Sylet 1.5GB External SCSI Drive.....	\$299
32815	Sylet 1.5GB Cartridge.....	\$79.95
48947	Sylet 1.5GB Cartridge 3-Pack.....	\$199.95

VST

57228	Internal Zip Drive for PowerBook G3.....	\$239.95
-------	--	----------

38024	Internal Zip Drive for 3400/5300/190.....	\$229.95
-------	---	----------

DIGITAL CAMERAS
AGFA

36253	EPHOTO 307.....	\$249
47140	EPHOTO 1280.....	\$599
100139	EPHOTO 1680.....	\$899

SONY

Mavica FD71 Digital Camera
Point, shoot & store photos on standard 3.5" floppy disks!
59953 Only \$699



Canon USA

57435	ZR MiniDV Camcorder.....	\$995
101674	Vistara MiniDV Camcorder.....	\$1495
57434	Optura MiniDV Camcorder.....	\$1795

Connectix

26954	Color QuickCam.....	\$189.95
-------	---------------------	----------

Kodak

52680	DC200 Digital Camera (adapter reqd.).....	\$399
56897	DC220 Zoom Digital Camera.....	\$699
56896	DC260 Zoom Digital Camera.....	\$999

Nikon

55074	CoolPix 600.....	\$579.95
55075	CoolPix 900.....	\$829.99

Olympus

46391	D-320L Digital Camera.....	\$399
-------	----------------------------	-------

55672	D-340L Digital Camera.....	\$499
47234	D-600L Digital Camera.....	\$899

Sony

103305	NEW! Mavica FD81 Digital Camera.....	\$799
--------	--------------------------------------	-------

INPUT DEVICES
Kensington

25696	Mouse in a Box for Mac.....	\$39.95
39536	Kensington Orbit for Mac.....	\$69.95
25697	Turbo Mouse.....	\$99.95

Macally

102334	USB iHub 4 Port Hub for iMac.....	\$49.95
102331	USB iBall 2 Button Trackball for iMac.....	\$47.95
102329	USB iKey 105 Extended Keyboard for iMac.....	\$49.95

MDS

21456	2-Button Ergonomic Mouse.....	\$19.95
21459	2-Button Trackball.....	\$32.95
22799	105-Key Soft-Touch Keyboard.....	\$39.95
40380	2-Button Joystick.....	\$34.95
40381	Bat Wing GamePad.....	\$26.95

HANDHELD DEVICES
3Com

54104	Palm III w/Travel Pack (\$135 Value).....	\$349.95
39153	PalmPilot Pro.....	\$229.95
39154	PalmPilot Modem.....	\$129.95
36111	PalmPilot Mac Pack.....	\$14.95
33944	PalmPilot Slim Leather Carrying Case.....	\$19.95



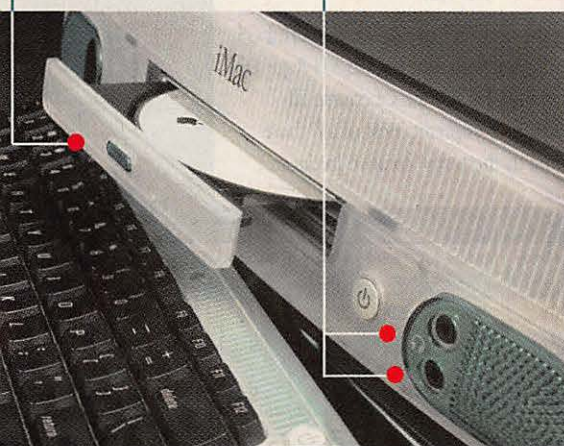
Take A Closer Look.



The iMac has two USB ports, which replace SCSI, ADB and traditional Mac serial ports with an inexpensive, speedy alternative. You can connect up to 127 devices to your iMac, and plug and unplug devices without restarting!

With the iMac's 32MB of RAM (expandable to 128MB), you'll have plenty of memory to run all your favorite applications and games. Plus, a 4GB EIDE hard drive and 24X ATAPI CD-ROM drive are standard equipment.

The iMac delivers premium sound through its built-in SRS stereo speakers. Music lovers also have the option of attaching external speakers. Two headphone jacks makes gaming a blast for players (but quiet for you).



ALL NEW! USB Products for iMac

USB SyQuest SparQ 1GB for iMac

SparQ 1.0 Includes FREE 1GB cartridge!

ONLY **\$249.95** 102305

SyQuest SparQ 1GB Media

47252 Single	\$49.95
102637 2-Pack	89.95
102638 Bonus (Buy 4, 1 FREE!)	179.95

USB 120MB SuperDisk Drive for iMac

IMATION ONLY **\$149.95** 60094

SuperDisk LS-120 Media

101206 Single	\$17.95
101209 5-pack	59.95
101211 10-pack	99.95

USB Astra 1220U USB Scanner

UMAX 36-bit Quality 600 x 1200 Resolution

ONLY **\$129** 101653

*After \$20 mail-in rebate.

Microsoft Office 98

ONLY **\$349.95** **SAVE \$100** 50174

*With iMac purchase.

USB Macally Peripherals for iMac

macally 4-Port iHub

Easily add peripheral devices.

ONLY **\$49.95** 102334

iMouse Single-Button Mouse

102332 iMouse Single-Button Mouse **\$24.95**

102331 iBall 2-Button Trackball **47.95**

102329 iKey 105 Extended Keyboard **99.95**

USB Asanté Talk

ASANTÉ ONLY **\$89.95** 101177

EtherNet to LocalTalk connection adapter

USB Stylus Color 740

EPSON ONLY **\$279.95** 100452

1440 x 720dpi
Photo-quality Color
Laser Sharp Black Text

USB DeskJet 697C

HP HEWLETT PACKARD Expanding Possibilities

ONLY **\$249.95** 102727

iMac connectivity kit
5ppm color
ColorSync 2.0 support

Order Weekends, Get It Monday!



Order as late as **2:45 a.m. ET** (that's in the morning) and still get delivery next day!



We'll Build It FREE!

We will configure your Mac the way YOU want it... at no additional charge!

MEMORY

100621	iMac 32MB	\$69.95
100626	iMac 64MB	139.95
100627	iMac 128MB	279.95
57248	PowerBook G3 32MB (Wallstreet)	69.95
57249	PowerBook G3 64MB (Wallstreet)	139.95
57250	PowerBook G3 128MB (Wallstreet)	279.95
38741	PowerBook G3 16MB	59.95
38743	PowerBook G3 32MB	99.95
49272	PowerBook G3 64MB	149.95
49167	PowerBook G3 128MB	299.95
43593	PowerBook 2400 Series 32MB	99.95
43594	PowerBook 2400 Series 64MB	159.95
38741	PowerBook 3400 Series 16MB	59.95
38742	PowerBook 3400 Series 24MB	89.95
38743	PowerBook 3400 Series 32MB	99.95
38744	PowerBook 3400 Series 64MB	159.95
38746	PowerBook 3400 Series 128MB	299.95
24151	PowerBook 5300 Series 16MB	69.95
24152	PowerBook 5300 Series 32MB	129.95
27819	PowerBook 5300 Series 48MB	179.95
27820	PowerBook 5300 Series 56MB	229.95
49124	Power Mac G3 16MB	29.95
49125	Power Mac G3 32MB	39.95
49127	Power Mac G3 64MB	89.95
49130	Power Mac G3 128MB	179.95
22999	Power Mac 7200,7300,7500,7600 16MB	29.95
23000	Power Mac 7200,7300,7500,7600 32MB	49.95
23001	Power Mac 7200,7300,7500,7600 64MB	79.95
22999	Power Mac 8500,8600,9500,9600 16MB	29.95

23000	Power Mac 8500,8600,9500,9600 32MB	49.95
23001	Power Mac 8500,8600,9500,9600 64MB	79.95

MODEMS

Best Data		
58886	56K Ext. Modem (After \$20 mfr's mail-in rebate)	\$69.95
56473	56K PCMCIA Card Modem	79.95
Diamond Multimedia		
53088	Supra Express 56K V.90 Ext. Modem	\$119.95
Global Village		
54275	56K TelePort Ext. V.90	\$139.95

100961	56K TelePort Ext. V.90 with G3 purchase	99.95
Zoom		
30842	33.6 External Faxmodem V34X Plus	\$97.95
53670	56K Dualmode External Faxmodem	119.95
Simple Technology		
49812	56K Communicator PC Card Modem	\$119.95

MONITORS

Hitachi		
43310	MC6315 RasterOps 17" Monitor	\$399
43348	MC7515 RasterOps 19" Monitor	689
33148	MC801HR RasterOps 21" Monitor	1399
Mitsubishi		
51575	Diamond Plus 70 17" Monitor	\$469
36276	Diamond Pro 91TXM 21" Monitor	1049

101099	Diamond Pro 1000e 21" Monitor	1299
NEC		
43813	A700 17" Monitor	\$429
57869	E900 19" Monitor	679
103710	E1100 21" Monitor	999
Sony		
48756	CPD-200GS 17" Monitor	\$569

NEC

MultiSync LCD 1510V Monitor

Rotates from portrait to landscape; hi-res capability

58980 \$1279

CALL or CLICK™

24 HOURS 7 DAYS A WEEK!



TOLL FREE ORDERING

www.macconnection.com

MacConnection®

The Original Macintosh Mail-Order Source—Since 1984!

800-600-9417

Millions of Satisfied Customers!

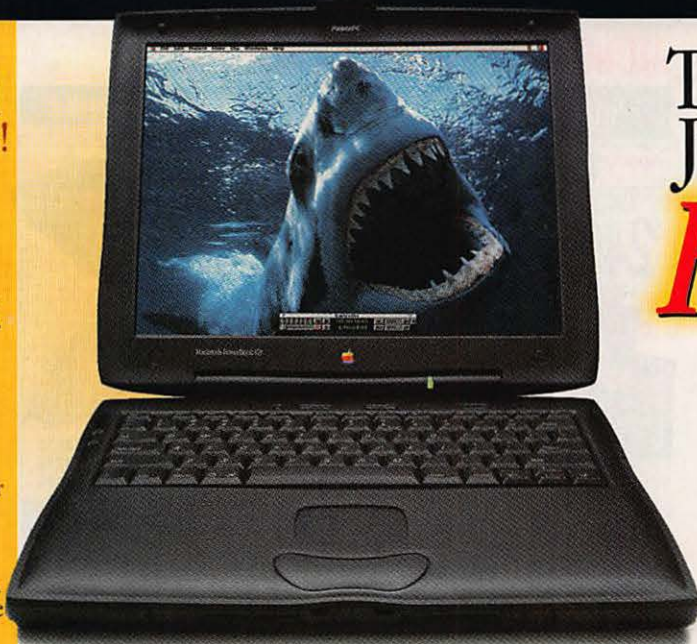
Since 1984 MacConnection has been providing award-winning service and support for Macintosh users. Over on the PC side, PC Connection has



an unprecedented seven times by PC World Magazine, and honored as one of the 100 most influential companies by PC Magazine. So,



whichever platform you're using you can be sure to find a Connection you can trust.



The Fastest Just Got Faster.

- Up to 300MHz G3 processor
- Up to 8GB Hard Drive
- Up to 14.1" TFT Display
- Up to 7 Hours Battery Life On average with dual battery operation (batteries are not included)

BusinessWeek Magazine calls the new PowerBook G3 line *"the Lamborghini of laptops."*

JULY 1998

— and with good reason! Three new 14.1" models are now available, housing the latest release of the powerful G3 processor, with speeds up to a Pentium-crushing 300MHz. Faster video performance with a new 4MB ATI Rage LT Pro video card built into each 14.1" model, and a DVD Video Drive in the new 300MHz model. Of course all PowerBook G3s have built-in 10BaseT Ethernet and PC Card slots that are CardBus-compliant. Best of all, these stylish, powerful systems can be yours for as little as \$1999, giving new meaning to the term "creative freedom."

APPLE POWERBOOK® G3

Item #	Processor/Speed	Backside Cache	Display	RAMStd/Max	VRAM	Hard Drive	Modem	CD-ROM	Weight	S-Video	10BT	Price
56115	G3/233MHz	—	12.1" DSTN	32/192MB	2MB	2GB	—	20X	7.2lb	—	Y	\$1899*
103558	G3/233MHz	512K	12.1" TFT	32/192MB	4MB	2GB	56K	20X	7.6lb	Y	Y	\$2299*
104250	G3/233MHz	512K	14.1" TFT XGA	32/192MB	4MB	2GB	56K	20X	7.6lb	Y	Y	\$2799*
104251	G3/266MHz	1MB	14.1" TFT XGA	64/192MB	4MB	4GB	56K	20X	7.6lb	Y	Y	\$3499*
104252	G3/300MHz	1MB	14.1" TFT XGA	64/192MB	4MB	8GB	56K	DVD	7.6lb	Y	Y	\$4999*

*Floppy Drive not included.

WHILE SUPPLIES LAST!

FREE VST Zip Drive
#104250, #104251, #104252 Only

- 48749 GDM-400PS 19" Monitor.....\$49
- 48750 GDM-500PS 21" Monitor.....\$299

ViewSonic
21" G810 Monitor
• 0.25mm dot pitch
• 1600 x 1200 @ 75Hz
• 20" viewable
\$1254 \$999

- ViewSonic**
- 39386 Optique Q53 15" Monitor.....\$189
 - 39387 Optique Q71 17" Monitor.....\$259
 - 43960 Optique V95 19" Monitor.....\$549
 - 54160 Optique V115T 21" Monitor.....\$1049

NETWORKING

- Asanté**
- 101177 Asanté Talk Adapter.....\$94.95
 - 57993 Asanté Fast 10/100 PCI Adapter.....\$49.95
 - 57994 Asanté Fast 10/100 PCI Adapter 5 pack.....\$239.95
 - 100082 FriendlyNet 10/100 4-Port Switch.....\$199.95
 - 100083 FriendlyNet 10/100 8-Port Switch.....\$394.95
 - 100084 FriendlyNet 10/100 16-Port Switch.....\$1149.95
 - 49859 FriendlyNet 8+2 Switch for Small Networks.....\$329.95
 - 49858 FriendlyNet 8+2 Switch Plus.....\$329.95
 - 49855 FriendlyNet 10BaseT Hub w/5 RJ45 Ports.....\$46.95
 - 38297 FriendlyNet 10BaseT Hub w/8 RJ45 Ports.....\$54.95
 - 2772 Asanté 10BaseT Hub 12 Port.....\$146.95

- 18906 Asanté 10BaseT Hub 24 Port.....\$229.95
- 2583 FriendlyNet 10BaseT Ethernet Adapter.....\$29.95
- 2580 FriendlyNet 10Base 2 Ethernet Adapter.....\$39.95
- 6677 MacCon Nubus 10BaseT/5 Ethernet Adapter.....\$89.95
- 21488 Asanté 100BaseTX PCI Ethernet Adapter.....\$129.95
- 56712 MacCon 10BaseT LC Ethernet Card.....\$79.95
- 17702 MicroPrint 10BaseT/5 to LocalTalk Converter.....\$229.95

Farallon

- 102103 EtherMac iPrint Adapter.....\$99.95
- 11607 Transceiver AAUI 10BaseT.....\$99.95
- 18193 EtherWave Multi-Printer.....\$129.95

SOFTWARE

Apple

- 103532 **NEW!** Mac OS 8.5 w/FREE Beat the House & Classic 5.....\$99
- 102450 Mac OS 8.5 10-user.....\$797.95
- 43931 Apple Remote Access 3.0 Personal Server.....\$124.95
- 102123 Web Construction Kit.....\$69.95

Adobe

- 100493 **NEW!** Adobe Graphics Studio.....\$999.95
- 57851 Adobe Image Ready w/Photoshop.....\$89.95
- 57850 Adobe Image Ready.....\$179.95
- 54672 Adobe Photoshop 5 Upgrade.....\$189.95
- 54673 Adobe Photoshop 5.....\$598.95
- 55126 Adobe Premiere 5.0 Upgrade.....\$189.95
- 55124 Adobe Premiere 5.0.....\$589.95
- 32844 Adobe PageMaker 6.5.....\$549.95

- 40860 Adobe PageMill 2.0.1.....\$94.95
- 44259 Adobe Acrobat 3.0.1 Upgrade.....\$54.95
- 100197 Adobe Illustrator 8.....\$369.95
- 43825 Adobe Acrobat 3.0.1.....\$189.95

Aladdin Systems

- 46707 Spring Cleaning 2.0.....\$49.95
- 52083 FlashBack 1.1.....\$44.95*
- 47006 StuffIt Deluxe 4.5.....\$78.95
- 44801 Private File.....\$47.95

*After mfr's \$20 mail-in rebate

Alien Skin Software

- 35801 Eye Candy 3.0 for Photoshop.....\$119.95
- 48026 Eye Candy for After Effects.....\$499.95

Bare Bones Software

- 44284 BBEdit 4.5.1.....\$99.95

Broderbund

- 45697 Riven: The Sequel to Myst.....\$44.95
- 53302 Journeyman Project 3: Legacy of Time.....\$29.95
- 46770 Where in Time is Carmen Sandiego?.....\$33.95
- 57551 Where in the USA is Carmen Sandiego Deluxe CD.....\$34.95
- 57552 Where in the World is Carmen Sandiego Deluxe CD.....\$34.95
- 52565 Carmen Sandiego Math Detective.....\$34.95
- 46771 Carmen Sandiego Word Detective CD.....\$33.95
- 46769 Arthur's Birthday CD.....\$28.95
- 37182 Arthur's Reading Race CD.....\$29.95
- 54921 Kid Pix Studio Deluxe.....\$29.95

Caere

- 51163 OmniPage 8.0 Upgrade.....\$99.95
- 51165 OmniPage 8.0.....\$49.95
- 34314 OmniForm.....\$149.95

Casady & Greene

- 51351 Grammarian.....\$49.95
- 30163 SpellCatcher.....\$49.95
- 100415 Conflict Catcher 8.....\$49.95*

*After \$30 rebate for previous owners.

CE Software

- 44892 QuickMail Office 5-User.....\$229.95
- 44893 QuickMail Office 10-User.....\$449.95
- 44894 QuickMail Office 25-User.....\$799.95
- 39945 QuickKeys.....\$89.95
- 52981 QuickKeys PowerPack.....\$24.95
- 57867 QuickKeys & QuickKeys PowerPack Bundle.....\$89.95

Connectix

- 58594 RAM Doubler 8.....\$44.95
- 46532 Speed Doubler 8.....\$54.95
- 100884 Virtual PC w/Windows 98.....\$169.95
- 50772 Surf Express.....\$34.95
- 52510 Virtual PC 2.0 Upgrade for Win95 & DOS.....\$32.95
- 52509 Virtual PC 2.0 w/DOS.....\$47.95

Corel

- 100988 CorelDRAW 8.0 Upgrade.....\$149.95
- 100942 CorelDRAW 8.0.....\$489.95

DeLorme

- 46966 GPS Receiver w/Street Atlas USA 4.0.....\$159.95

Extreme Machine.

The perfect machine for graphics pros and regular Joes is finally here! Macintosh G3 PowerBooks are built for superior speed and performance, and deliver it all with one of the brightest 14.1" screens in the industry.

Starts At
\$2799 104250

Lease for as low as \$101.08/mo.

Up to 300MHz G3 processor
32MB or 64MB SDRAM
Up to 8GB IDE Hard Drive
4MB SGRAM Video Memory
20X CD-ROM (DVD available)
K56flex Modem



FREE!
VST 100MB Zip Drive
\$239 Value!

*With any PowerBook G3 14.1" model purchase. Offer expires 12/31/98.

Limited Edition!

ONLY
\$2299 103558

Lease for as low as \$83.02/mo.

Only while supplies last!

233MHz G3 processor
32MB SDRAM
2GB IDE Hard Drive
4MB SGRAM Video Memory
20X CD-ROM
K56flex Modem



Available NOW!

PowerBook G3 Accessories

56129	AC Power Adapters	\$79
56131	Li-ion Rechargeable Battery	229
56133	Floppy Disk Drive	109
60331	FireWire Digital Video Kit	299



HOT PRODUCTS! HOT PRICES!

Add an Accelerator Card



Add a 56K Modem



Order Weekends, Get It Monday!



Order anytime on Saturday, until noon on Sunday, for Monday delivery.

43723	Street Atlas USA 4.0	42.95
43724	Street Atlas USA 4.0 & Phone Search USA 3.0	58.95
40204	Phone Search USA 3.0	29.95
Diamond Soft		
60001	Font Reserve	\$114.95
Extensis		
59681	NEW! Extensis QX-Tools 4.0	\$148.95
59685	NEW! Extensis Beyond Press 4	489.95
51891	PowerSuite Quark	194.95
51959	PowerSuite Photoshop	194.95
41918	Extensis Preflight Pro 2.0	379.95
52185	Extensis PhotoFrame 1.0 Vol. I	124.95
52536	Extensis PhotoFrame 1.0 Vol. II	124.95
52539	Extensis PhotoFrame Vol. I&II	194.95
102126	Extensis MaskPro 2.0	289.95
46442	Extensis QX-Effects 3.0	124.95
40058	Extensis IntelliHance 3.0	94.95

FileMaker		
54077	NEW! FileMaker Pro Developer's Ed.	\$479.95
100345	FileMaker Pro 4.1 for Mac	134.95*
60103	FileMaker Pro Server 3.0 Upgrade	299
60100	FileMaker Pro Server 3.0	899.95
54968	Home Page 3.0	89
54969	Home Page 3.0 Upgrade	44
*After mail-in upgrade rebate.		
GoLive		
55835	NEW! CyberStudio 3.0	\$289.95

GT Value Products

51584	NEW! Top Gun	\$49.95
51598	NEW! X-Men: Apocalypse Add-on for Quake	19.95
43330	Civilization II	47.95
51582	Deadlock	49.95
51597	Play to Win Casino	19.95
40728	Duke Nukem 3D Atomic Edition	49.95
47430	Duke It Out in DC Add-On	17.95
43329	Quake	29.95
43331	Master of Orion 2	27.95
47433	Shadow Warrior	27.95

102261	Unreal	44.95
48165	Jack Nicklaus 4	49.95
FWB Software		
58551	Hard Drive Toolkit PE 2.5 w/FREE CD-ROM Toolkit	\$49*
49791	Hard Drive Toolkit	94.95
*After mfr's mail-in rebate.		
Insignia		
101338	SoftWindows 98	\$164.95
50127	SoftWindows 95 5.0	189.95
44701	RealPC	74.95
Intuit		
46300	Quicken Basic 98	\$29.95*
46302	Quicken Deluxe 98	39.95*
27057	QuickBooks Pro 4.0	199.95

26544	QuickBooks 4.0	119.95
*After mfr's rebates for previous Quicken users		
Jian		
56908	Marketing Builder Interactive	\$74.95
Leister		
44177	Reunion 5.0	\$99.95
McAfee		
101611	VirusScan 4.0 Deluxe	\$9.95
Macromedia		
51112	FreeHand 8 Upgrade	\$144.95
51111	FreeHand 8	394.95
56091	Flash 3	294.95
55837	Dreamweaver 1.2	294.95
56999	Director 6.5 Upgrade	394.95



www.macconnection.com



MacConnection
The Original Macintosh Mail-Order Source—Since 1984!

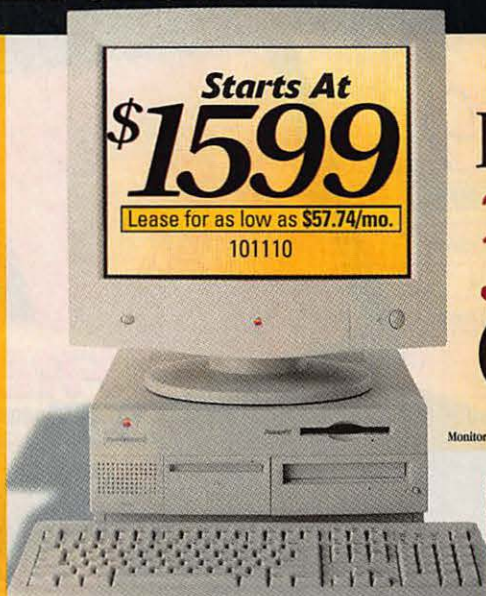
800-600-9417

We carry more than 20,000 Products!

Don't see something? Just give us a call!

We did it first!

- One-Minute Mail Order
- Everything Overnight™
- Order until 2:45 a.m.; same-day delivery!
- Order custom-configured computers until midnight with same-day delivery!



Starts At
\$1599
Lease for as low as \$57.74/mo.
101110

Monitor Sold Separately

Fast and Affordable.
300MHz
G3 Desktops!

"Despite identical chip speeds, the Apple G3 processor outperforms the Pentium."
—Newsweek May 1998

NEW G3 Models!

The Power Macintosh G3 Desktop 266 and 300 computers deliver outstanding performance at prices you can afford. Designed to meet the needs of a wide range of users, they incorporate the PowerPC G3 processor, 512K Level 2 backside cache on the processor module, 66MHz system bus, 24X CD-ROM (one model even has a DVD-Video solution built in!), 32 or 64MB of RAM expandable to 768MB, 4 or 6GB hard drives and additional capabilities for graphics and audio support.

Up to 300MHz G3
Up to 64MB RAM
24X CD-ROM
Up to 6GB Hard Drive
100MB Zip
Select Models Only

Get **\$100⁰⁰**
in Connection Cash!*



*With purchase of any Desktop or Minitor. Ends 12/31/98.

APPLE POWER MAC® G3

Item #	Model	Processor/Speed	RAM Std/Max	Hard Drive/Type	VRAM Std/Max	Cache/MHz	Expansion	CD-ROM	Int. Zip	+ Features	Price
101110	G3/266 Desktop	G3/266MHz	32/768	4.0GB; IDE	2MB/6MB	512K/133MHz	3PCI / 1 bay	24X	—	—	\$1599
101111	G3/300 Desktop	G3/300MHz	64/768	6.0GB; IDE	2MB/6MB	1MB/150MHz	3PCI / 1 bay	24X	Y	—	1999
103556	G3/266 Desktop	G3/266MHz	64/768	4.0GB; IDE	6MB/6MB	512K/133MHz	3PCI / 1 bay	DVD	—	56K Modem	1749
101746	G3/300 Minitor	G3/300MHz	64/768	8.0GB; IDE	6MB/6MB	1MB/150MHz	3PCI / 1 bay	24X	Y	Video In/Out	2399
101744	G3/333 Minitor	G3/333MHz	128/768	9.0GB; U/W SCSI	6MB/6MB	1MB/167MHz	3PCI / 2 bay	24X	—	—	2999

WHILE SUPPLIES LAST!

- 56085 FreeHand Design in Motion Suite.....**494.95**
- 56089 Flash 3 Upgrade.....**94.95**
- 56091 Flash 3.....**294.95**
- 55837 Dreamweaver 1.2.....**294.95**
- 56999 Director 6.5 Upgrade.....**394.95**

MetaCreations

- 40267 MetaCreations Painter 5.5 Web Ed.....**\$299.95**
- 40268 Painter 5.5 Upgrade.....**94.95**
- 56932 MetaCreations Poser 3.....**189.95**
- 52794 Painter Classic.....**94.95**
- 53480 Painter 3D.....**279.95**
- 56935 Kai's SuperGoo.....**48.95**
- 24509 Kai's Power Tools 3.0.....**124.95**
- 48763 Bryce 3D.....**179.95**
- 43679 Ray Dream Studio 5 Upgrade.....**94.95**
- 43677 Ray Dream Studio 5.....**279.95**
- 46400 Ray Dream 3D.....**94.95**
- 56931 Infini-D 4.5.....**499.95**

Microsoft

- 50177 Office 98 Upgrade.....**\$258.95**
- 50174 Office 98.....**349.95****
- 54901 Office 98 At A Glance.....**16.95**
- 50183 Office 98 Gold Upgrade.....**359.95**
- 50182 Office 98 Gold Edition.....**439.95****
- 50185 Word 98 Upgrade.....**129.95**
- 50184 Word 98.....**359.95**
- 50193 PowerPoint 98 Upgrade.....**129.95**
- 50192 PowerPoint 98.....**359.95**

- 50189 Excel 98 Upgrade.....**129.95**
- 50188 Excel 98.....**359.95**
- 53045 Office 98 Upgrade - Level A Vol. License.....**249.95***
- 53042 Office 98 - Level A Vol. License.....**369.95***

MindScape

- 60133 Mavis Beacon Teaches Typing 9.0.....**\$39.95**
- 60113 National Geographic 109 Years.....**179.95**

NetObjects

- 58771 NetObjects Fusion 3.0 Upgrade.....**\$94.95**
- 57929 NetObjects Fusion 3.0.....**194.95**

NewTek

- 54127 Inspire 3D.....**\$399.95**
- 45689 LightWave 3D Upgrade.....**449.95**
- 51594 LightWave 3D 5.5.....**1789.95**

Niles

- 53475 EndNote 3.0.....**\$169.95**

PaceWorks

- 52993 ObjectDancer 1.5.....**\$194.95**

Pantone

- 29334 Survival Kit w/ Formula & Solid Process Guides.....**\$149.95**
- 54270 Pantone Office Color Assistant.....**24.95**
- 43108 Pantone Personal Calibrator.....**44.95**
- 43106 Pantone ColorWeb Pro.....**54.95**
- 28902 Pantone Formula Guide.....**59.95**
- 27656 Pantone Process Guide.....**59.95**

PANTONE®
ColorWeb
31755 Only **\$29.95**
ColorWeb Pro
31106 Only **\$54.95**

- 32646 Pantone Solid to Process Guide.....**79.95**
- 28901 Pantone Hexachrome Selector.....**79.95**
- 31756 Pantone HexWrench.....**339.95**
- 31752 Pantone ColorDrive/Survival Kit Bundle.....**194.95**
- 31749 Pantone ColorDrive 1.5.3 w/ColorWeb.....**94.95**
- 31755 Pantone ColorWeb.....**29.95**

Qualcomm

- 51944 Eudora Pro 4.0.....**\$38.95**
- 55093 Eudora Pro 4.0 5-User.....**159.95**

Quark

- 47735 QuarkXPress 4.03.....**\$679.95**

Symantec

- 55153 Norton AntiVirus v5.0.....**\$69.95***
- 101293 Norton Utilities 4.0.....**49.95**
- 102496 Norton Utilities 4.0 10-Pack.....**799.95**
- 3955 Suitcase.....**69.95**
- 43831 ACT! 2.8.....**159.95**
- 38176 Suitcase Upgrade.....**39.95**
- 43560 ACT! 2.8 Upgrade.....**69.95**
- 49629 Visual Café for Java PDE.....**279.95**

- 48815 Visual Café for Java DDE.....**499.95**

*After \$50 mail-in rebate

Thursby Software

- 49708 DAVE 2.0.....**\$124.95**
- 49709 DAVE 2.0 5-User.....**499.95**
- 49710 DAVE 2.0 10-User.....**849.95**
- 49711 DAVE 2.0 25-User.....**1999.95**

Xaos

- 40314 Total Xaos Bundle.....**\$169.95**
- 37495 Terrazzo 2.0.....**94.95**
- 35942 TypeCaster 1.15.....**94.95**
- 37496 Paint Alchemy 2.0.....**94.95**

Xerox

- 51427 TextBridge Pro 8.0.....**\$49.95**

UPGRADES

Newer Technology

- Apple PowerBook 1400, 2400
- 54335 NUPowr 1400 G3 216MHz/512K.....**\$679**
- 54339 NUPowr 2400 G3 240MHz/512K.....**829**
- 54340 NUPowr 1400 G3 250MHz/1MB.....**979**
- Apple Power Mac 7300, 7500, 7600, 8500, 9500, 9600; UMAX 1700, 5900
- 52512 MAXpowr G3 Series 220MHz/110/512K.....**549**
- 45169 MAXpowr G3 Series 250MHz/125/512K.....**599**
- 54457 MAXpowr G3 Series 275MHz/138/512K.....**849**
- 60349 MAXpowr G3 Series 300MHz/150/512K.....**799**

The Pros' Choice.

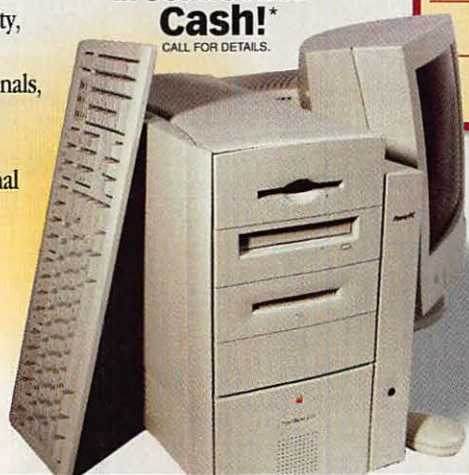


Monitor Sold Separately

Power Mac G3 Minitower 333MHz.

Delivering scorching speed and true expandability, the new Power Mac G3 models are designed to serve the needs of graphics and design professionals, content creators and general productivity users. Every model includes a high-capacity hard disk drive and at least one expansion bay for additional storage, plus a 24X CD-ROM, built-in 10BaseT Ethernet support, and high-quality video and audio. You also can add the Apple FireWire option that enables you to connect your digital video camcorder to produce professional-quality digital video easily and affordably. Choose the system that's right for you, and hang on for the ride!

Get
\$100⁰⁰
in Connection
Cash!*
CALL FOR DETAILS.



Up to 333MHz G3
Up to 128MB SDRAM 768 Max.
Up to 9GB Ultra/Wide SCSI Hard Drives
Up to 6MB VRAM
24X CD-ROM
100MB Zip
Select Models Only



OUR POLICY • VISA, MASTERCARD, AMERICAN EXPRESS, and NOVUS cards. No surcharge. Orders are shipped via Airborne Express at \$5.95 per order up to 3 pounds; over 3 pounds - \$5.95 plus \$1.25 per pound (for fraction thereof). This does not apply to orders shipped outside the Continental U.S. or to APO and FPO addresses. Shipping to Hawaii, Alaska, Canada, Puerto Rico, and the U.S. Virgin Islands may require additional time and charges—call 800-800-2222 for shipping information. International orders, add 2% surcharge and \$2.30 insurance. A contact phone or fax number is required. You will be responsible for actual shipping charges, as well as tax and duty. Call 603-446-2222 or fax 603-446-7791 for information. Items of excessive size and/or weight may require additional delivery time. Checks must be drawn on a U.S. bank in U.S. dollars. Upon receipt and approval, personal and company checks clear the day they are received for immediate shipment.

OUR RETURN POLICY • Some products carry a money-back guarantee (MBG), allowing you to return your purchase for a full refund, excluding shipping charges, if you're not completely satisfied. Be sure to ask your Sales Consultant if the product(s) you're ordering carry the MBG. • All products are covered by their respective manufacturers' warranties. Within thirty (30) days of purchase, we will replace or repair, at our sole discretion, any product that is deemed defective. After 30 days, the manufacturer's warranty process must be followed. • All non-defective returns authorized by MacConnection are subject to a 15% restocking fee, and must be completed within 30 days of invoice. • PLEASE NOTE: Due to restrictions placed upon us by the manufacturers, computers and printers are returnable in the first 30 days for repair only. Computers, printers, LCD projectors, and Quark products are not returnable for credit or exchange. • All returns require prior authorization and must be returned with all original packaging, accessories and documentation, including registration card; so please don't discard these materials. To request a return authorization (RMA), please call 1-800-800-0011. RMAs are valid for 10 days. Incomplete or unauthorized returns will be refused.

YEAR 2000 DISCLAIMER
PC Connection, Inc. encourages its suppliers to make their products and services year 2000 compliant. However, PC Connection, Inc. does not represent or warrant that any product advertised or sold by it will not experience date related errors resulting from the turn of the century (the year 2000). Any information provided on products have been furnished by the manufacturer. PC Connection, Inc., Milford, NH, MacConnection & the raccoon characters are registered trademarks of PC Connection, Inc. All other trademarks remain the property of their respective companies. Prices and promotions are subject to change without notice. We are not responsible for typographical errors.

102716	MAXpower G3 Series 333MHz/166/1MB	1199
102717	MAXpower G3 Series 366MHz/183/1MB	1499
102718	MAXpower G3 Series 400MHz/200/1MB	1999
Apple Power Mac 6100		
51096	MAXpower G3 210MHz/512K	499
51097	MAXpower G3 240MHz/1MB	699
Apple Power Mac 7100, 8100		
51098	MAXpower G3 210MHz/512K	599
51099	MAXpower G3 240MHz/1MB	799
57443	MAXpower G3 Series 220MHz/512K non-AV	579
57441	MAXpower G3 Series 240MHz/1MB non-AV	779
Power Computing PowerBase		
52517	MAXpower G3 Series 220MHz/110/512K	549
UMAX CS50, C600		
52515	MAXpower G3 Series 220MHz/110/512K	549

102719	NEW! MAXpower G3 Series 333MHz/166/1MB	1199
102720	NEW! MAXpower G3 Series 366MHz/183/1MB	1499
102721	NEW! MAXpower G3 Series 400MHz/200/1MB	1999

Orange Micro

58061	Orange PC 626 PR200 MMX/16MB	\$499
102181	Orange PC 627 1D200 MMX/16MB/WinNT	549

UPS/SURGE

American Power Conversion

56170	Back-UPS Pro 650 PNP (410-watt)	\$279.95
21929	Back-UPS Pro 1000	389.95

3858	Back-UPS 400	99.99*
9685	SurgeArrest Pro 7	29.95
Belkin		
53628	ReSource UPS	\$89.95
102124	SurgeMaster w/TelClear	14.95
52147	SurgeMaster II Premiere	27.95
102124	SurgeMaster II Premiere w/TelClear	29.95
52145	SurgeMaster II Gold	34.95

TrippLite

100094	Internet Office 400VA UPS While supplies last	\$89.95
--------	---	---------

VIDEO CARDS

ATI Technology

103289	Nexus GA - 16MB, PCI	\$489
49733	XCLAIM VR, 4MB	239.95



ix MICRO

ix 3D Ultimate Rez
128-bit, 8MB VRAM
Only \$199.95*

*When bundled with a system or monitor.

IX Micro

47782	Ultimate Rez - 8MB, PCI, VRAM	\$469
52334	Pro Rez - 8MB, PCI, SGRAM	279.95
52336	Mac Rocket - 4MB, PCI, SGRAM	219.95
59576	Road Rocket - 4MB, PCI, SGRAM	279.95



CALL or CLICK™

24 HOURS
7 DAYS
A WEEK!

www.macconnection.com



TOLL FREE ORDERING

MacConnection®

The Original Macintosh Mail-Order Source—Since 1984!

800-600-9417

Circle 145 on reader service card

MACWORLD December 1998 25

NEW VERSION!

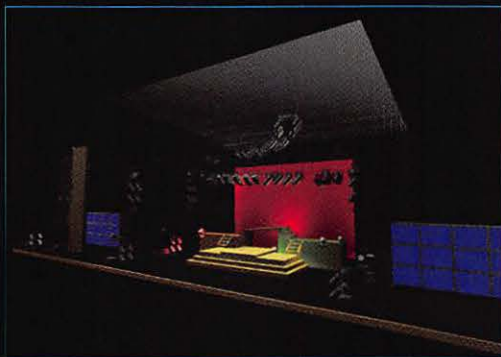
MiniCAD[®] 7

Windows[®]/Macintosh[®]

The Easiest, Most Cost-Effective Way to Design



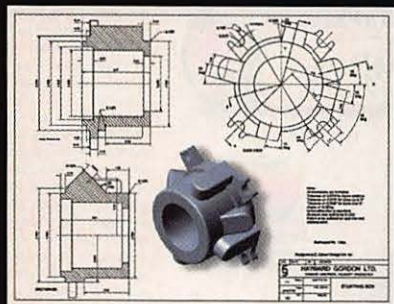
For more than a decade, professionals seeking an out-of-box CAD solution have selected the award-winning MiniCAD. This stand-alone program lets you create everything from precise working drawings to sophisticated client presentations



- Precise Sun Positioning
- Expression Evaluation Inside Textboxes
- Automated Databases/Spreadsheets
- Multi-Decimal Dimensioning
- Rotatable Grid and Customizable Coordinate System
- Plus Dozens of Performance and Interface Enhancements

To learn more about MiniCAD's extensive feature set and why the program has been called "the easiest, most cost-effective way to design," call 1-888-MINICAD or visit our Web site: www.diehlgraphsoft.com

MiniCAD 7, which retails for a suggested price of \$795, comes with 18 months of FREE Tech Support and a 30-Day Money-Back Guarantee!



tries—multi-decimal accuracy for precise drafting, a built-in database/spreadsheet to track costs and materials, extensive

Now this total CAD solution speeds your design process with these new features:

- True 3D Boolean Solid Modeling
- DWG and DXF Import/Export
- Dual-Unit Dimensioning
- Auto Wall Framing
- QuickDraw 3D Rendering
- Associative Hatching
- Automatic Wall Joining
- Next-Generation SmartCursor

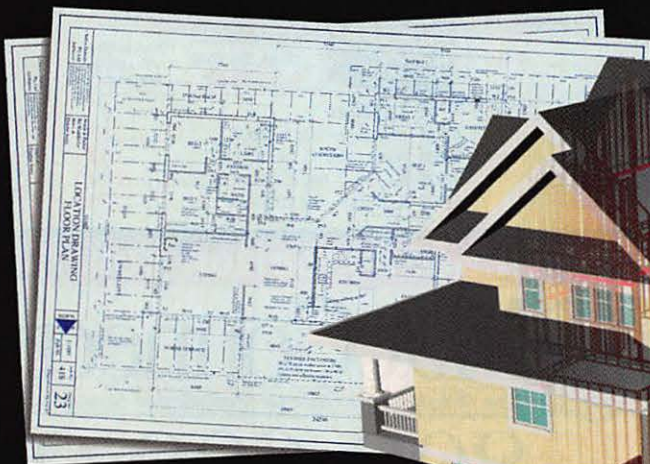
to extensive materials lists and cost estimates.

As always, MiniCAD 7 offers the same core features that have made it the program of choice for design professionals in more than 80 coun-

library of industry-specific symbols, cross-platform compatibility (Mac and Windows), and a macro programming language for automating complex and routine tasks.



MiniCAD 7—The only thing small is the price.



Choose 46 at www.macworld.com/Getinfo

MiniCad is a trademark of Diehl Graphsoft, Inc. All other brands and product names are trademarks of their respective holders.

The Vision Thing

by Andrew Gore

Macs Get With the Game

1998 ELEVATED MAC GAMING TO A NEW LEVEL. BUT THERE'S STILL ROOM TO IMPROVE.

THERE'S NO QUESTION that 1998 will go down as a watershed year for Macintosh gaming. Twelve months ago, before Apple's turnaround became the stuff of business legend, there was serious doubt

as to whether any game developer would do anything new on the Macintosh again. But here we are with the holiday season upon us, and we have the single-best library of cool Mac games to choose from in the history of the platform (see "20 Unforgettable Games," in this issue).

But lest we forget, Philip Dyer's "Game Hall of Shame" (see *The Game Room*, in this issue) reminds us that we still have a long way to go before Mac gaming is on a par with PC gaming. As always, I have a few humble suggestions on how Mac gaming can catch Wintel gaming and—who knows?—maybe even surpass it.

More versus Better

Which would you rather have: a lot of games or the *best* games? If it's the latter—which it should be—then don't be too threatened by the sheer volume of games on the PC platform. Let's not mince words here: all too many of those PC games are nothing more than rip-offs of other PC games. Doom clones, Tomb Raider clones, WarCraft clones. Sure, some games succeed in improving on the original—Quake, for example, is a vast improvement over Doom—but most do little more than demonstrate that imitation isn't always flattering; sometimes it's just repetitive.

Of course, there are plenty of games on the PC that aren't knockoffs—they're just bad. Once you filter out the poor copies and the bad originals, what you have left is a precious few PC games that are really worth the plastic they're burned into.

And therein lies the challenge: those great games still come out first for the PC, and if they ever come to the Mac,

their arrival often takes months (our cover girl, for example, stars in a game that has been available for PCs for over a year). Rather than try to convince every game developer to do a Mac version, Apple should focus on the hottest studios and ensure that the best PC games arrive on the Mac *simultaneously*.

Timing Is Everything

The reason for doing simultaneous releases is simple: publishers put a lot of marketing money behind the launch of their major games, which means that the developers' best opportunity to pick up the maximum number of Mac sales is to

that if it's an accurate simulation of what the sport is like, most trophy bucks must die of boredom.

But I digress. The point is that Apple must be selective in persuading mainstream developers to publish their games for the Mac. Because if too many of the wrong titles are brought to the platform—and therefore fail—game developers will once again shy away from shipping Mac games.

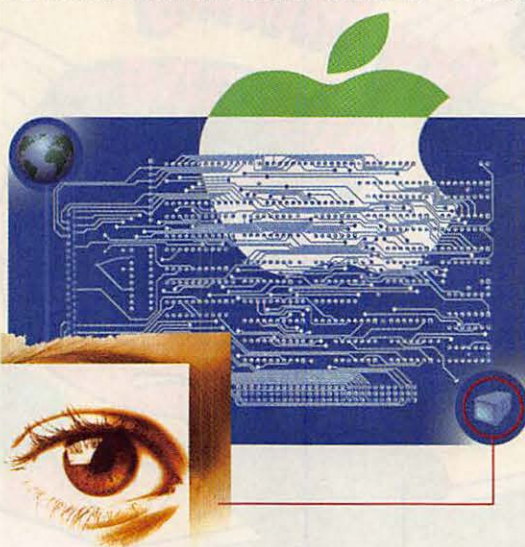
Mac First

Which brings me to an all-too-often overlooked strength of the Mac gaming market: cost of entry. To put it bluntly, sometimes it's better to be a big fish in a small pond. It can cost a small fortune to launch a new game in the PC market and get any attention. Contrast this with launching a game for the Mac platform, where the size of the market and the relatively small number of distribution channels make the cost of entry much lower. The Mac market essentially amounts to a great incubator for new games. There's even a precedent showing that this can work: Bungie, creator of breakthrough games such as *Marathon* and *Myth*, started as a Mac-only game developer during one of the

weakest moments in Mac gaming. Thanks to the excellence of its products, Bungie built up a solid business that was eventually strong enough to go cross-platform—and succeed.

As you can see, things are looking up for the Mac gaming market. Let's just hope Apple can continue its efforts to make the Mac into a compelling place to introduce the hottest new games. If it does, then 1999 will be a very good year, indeed. **m**

Andy "High Score" Gore is taking feedback (and *Tomb Raider* tips) at visionthing@macworld.com.



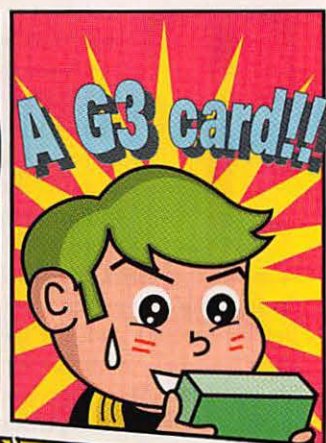
strike when the overall buzz about the game is loudest.

Of course, the trick for Apple is to encourage the right publishers to bring the right games to the Mac. It can be hard enough to pick the winners before they leave the starting gate, but the subtle differences between Mac and PC gamers make it even more difficult. As Philip Dyer points out in "Game Hall of Shame," runaway PC hit *Deer Hunter* is selling sluggishly on the Mac. No wonder: the game is mediocre in terms of graphics and game play, and let's just say

Major League Debut

Vpower PF G3/240

Takes the Mound



Vpower G3/300/1MB

PCI PowerMac

New Price

\$798**Vpower G3/300/512KB**

PCI PowerMac

\$598**NEW****Vpower G3/233**

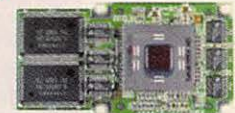
PCI PowerMac

New Price

\$389**Vpower PB 1400 G3/233**

PowerBook 1400

New Price

\$499**Vpower PM 4400 G3/240**

PowerMac 4400 Star Max 3000/4000

New Price

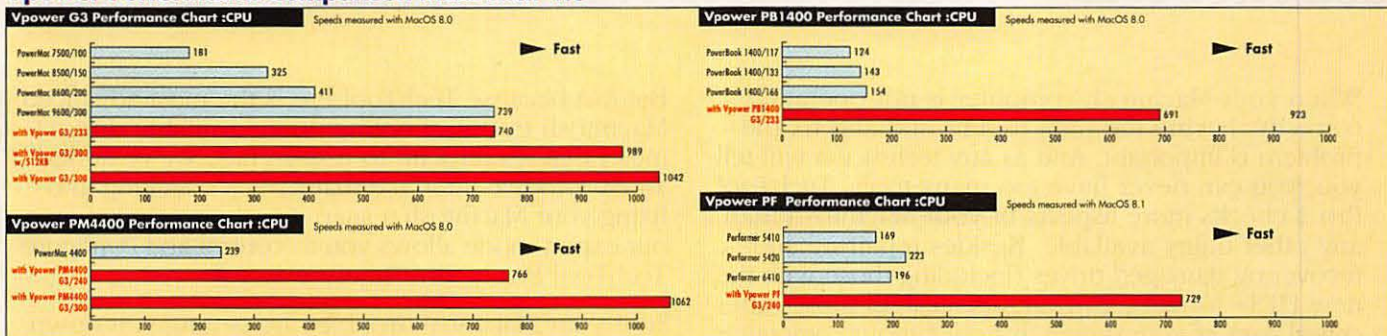
\$499**Vpower PM 4400 G3/300**

PowerMac 4400 Star Max 3000/4000

\$899**NEW****Vpower PF G3/240**Apple 54xx 64xx
Super Mac C500**\$499****NEW****Vpower Advantages:**

- Instantly revs up your machine with a next-generation PowerPC G3 (750) CPU
- Employs revolutionary backside cache technology
- Vpower PM 4400 G3/240 CPU outperforms the Power Macintosh desktop G3/233
- Vpower G3/300 delivers lightning-fast performance, second to no other chip of its generation
- Vpower G3/233 performance exceeds that of the desktop Power Mac G3/233
- Vpower PB 1400 G3/233 for the PowerBook 1400 series outperforms the Power Mac G3/233 desktop machine
- Improves your Power Macintosh 4400's CPU performance 2.8 times and FPU speed 1.5 times
- Boosts your PowerBook 1400 series machine's CPU speed by 4.5 times & approximately doubles your FPU speed
- Every Vpower card comes equipped with a high-speed L2 cache

- MacOS 8.5 compatible
- Brings a massive speed improvement to your computer's built-in video capabilities:
Vpower 4400 G3/240 yields a speed increase of 1.5 times
Vpower PB 1400 G3/233 approximately doubles the speed of your video performance
Vpower G3/300 provides a 3 to 5 times improvement for Power Mac 7500/8500, and roughly triples the video speed of a Power Mac 8600/250
Vpower 750 brings a 2 to 4 times improvement to the Power Mac 7500/8500, and increases the speed of a Power Mac 8600/250 by about 2.5 times.

Vpower Performance Comparison MacBench 4.0

Product	Compatible Machine	CPU	Cache	Price
Vpower G3/300	Power Mac 7300,7350,7500,7600,8500,8550,8600,9500,9600,9650 UMAX S900,S910	G3/300MHz	1MB/150MHz	\$ 798
Vpower G3/300/512	Power Mac 7300,7350,7500,7600,8500,8550,8600,9500 UMAX S900,S910	G3/300MHz	512KB/150MHz	\$ 598
Vpower G3/233	Power Mac 7300,7350,7500,7600,8500,8550,8600,9500 UMAX S900,S910	G3/233MHz	512KB/117MHz	\$ 389
Vpower PB 1400 G3/233	Power Book 1400	G3/233MHz	512KB/117MHz	\$ 499
Vpower PM 4400 G3/240	Power Mac 4400 Motorola Star Max 3000,4000	G3/240MHz	512KB/120MHz	\$ 499
Vpower PM 4400 G3/300	Power Mac 4400 Motorola Star Max 3000,4000	G3/300MHz	1MB/150MHz	\$ 899
Vpower PF G3/240	Power Macintosh/Performa 54xx,64xx Super Mac C500	G3/240MHz	512KB/120MHz	\$ 499

*The PowerPC name and the PowerPC logotype are trademarks of International Business Machines Corporation, used under license therefrom.

Vimage®

To Order Call Toll Free:

8 4 6 2 4 3
1 - 8 7 7 - 4 V I M A G E
 Mon-Fri 8AM to 5PM(PST) or FAX:(310)225-3989

www.vimagestore.com

Vimage is registered trademark of Interware co., Ltd. All other trademarks and registered trademarks are the property of their respective owners.

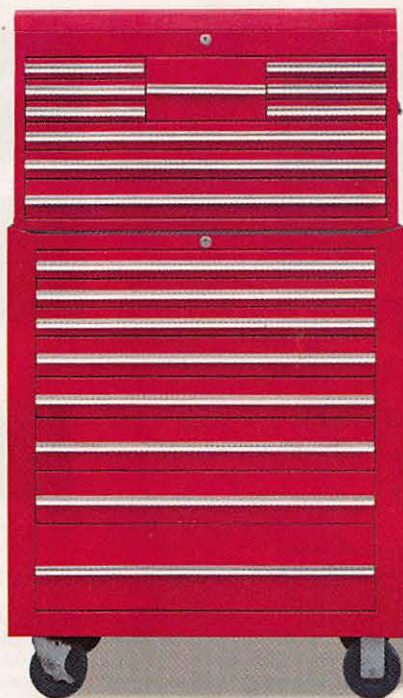
All major credit cards accepted, no surcharge. Government, Corporate and Educational P.O.s welcome. Vimage products are covered by a two-year limited warranty. Prices are subject to change without notice. Returns require authorization and are subject to a restocking fee. Vpower is a trademark of Vimage. ©1998 Vimage Corporation

For the newest information on Vimage products, check out www.vimagestore.com

If this is Norton™ ...



This is TechTool® Pro:



When your Macintosh computer is not operating correctly, having the right tool to find and fix the problem is important. And as any technician will tell you, you can never have too many tools. TechTool Pro 2 checks more aspects of your Macintosh than any other utility available. Besides repairing and recovering damaged drives (including those with the new HFS+ format), you can also test all those other critical parts of your system that our famous competitor ignores like RAM, CPU, floppy drives, scanners, modems, Internet connections, CD-ROM drives and much, much more.

But just because TechTool Pro is the most advanced Macintosh troubleshooting utility available doesn't mean that it's difficult to use. In fact, we've added an easy-to-use interface that makes checking and fixing your Macintosh a snap. For the advanced user, our expert mode allows you to control and configure TechTool Pro in almost any way you wish.

So if your Macintosh troubles are getting you down, check out TechTool Pro. After all, you have the most powerful computer in the world. Shouldn't you be using the most powerful utility?



Fix different.™

MicroMat Inc.
800-829-6227
707-837-8012
FAX: 707-837-0209
info@micromat.com
www.micromat.com

online

Let Your Browser Do the Walking

SMART BROWSING FINDS
INFORMATION BEFORE
YOU KNOW YOU NEED IT

by Cameron Crotty

Your Internet experience is hardly complete unless you've spent hours wading through multiple search engines. But Netscape claims that the next release of Communicator—version 4.5—will do much of the legwork for you. Meanwhile, Microsoft is beginning to release preliminary details about the next version of Internet Explorer.

Smart Browsing The next version of Navigator—currently available as a preview version on the Netscape Web site—will use the company's own databases and Web indexes to implement what the company calls Smart Browsing. One Smart Browsing feature, What's Related, attempts to quickly guide you to alternate sources of information. When you click on the What's Related button, Navigator automatically checks the current URL against Netscape's NetCenter databases and provides links to information and services related to the site you're currently viewing.



Another Smart Browsing feature, Internet Keywords, lets you use Navigator's Location field to find Web sites based on keywords in addition to URLs. For instance, typing "ford ranger" into the Location field automatically lands you at the Ford Ranger page of Ford's Web site.

Get the Messenger Netscape's Messenger e-mail/newsclient sports a

three-pane interface with folders and newsgroups on the left side of the screen, similar to the presentation in Microsoft's Outlook Express. Other Messenger enhancements include improved message-search and filtering options, a revamped address book, and the ability to synchronize Messenger addresses with a 3Com PalmPilot.

Communicator 4.5 will

also add a new feature called Roaming Access, which stores your profile (including preferences, bookmarks, and address books) on a directory server. You can then log on to the server from multiple machines—even a borrowed computer—and access the Web, and your e-mail, as if you were using your personally configured browser.

continues



Color Separations from Your Desktop

AN IMAGESETTER FOR \$6,995? NOT EXACTLY, BUT THE Accel-a-Writer 3G, from Xanté (334/342-4840, www.xante.com), when used in combination with Xanté's FilmStar 2 processing unit, can produce color separations on positive or negative film with 175-line halftones (by comparison, the halftones you see in *Macworld* are printed at 133 lines). Xanté describes the output as "near imagesetter quality." Maximum output size is 13 by 35.5 inches.

How does it work? Xanté took a Fuji-Xerox laser engine, boosted the resolution and halftone capabilities, and added software that compensates for the printer's tendency to shift images on the page. You can also produce film separations on the company's PlateMaker 3 printer. Once you've made the film, you run it through the FilmStar 2 processor, which increases toner density to improve image quality. The Accel-a-Writer 3G also functions as a PostScript 3 monochrome laser printer.—STEPHEN BEALE

To make maintenance easier for IT managers, Netscape has added a Roaming Access control to the Mission Control desktop, a centralized application for managing Netscape clients and servers.

As of December, the company had not announced when the final version of Communicator 4.5 would be available.

Microsoft Hedges As this article was going to press, Microsoft was beginning to release details about the next version of Internet Explorer for Windows. Early documents published for developers indicate that the company will improve the browser's page-rendering performance, particularly for Dynamic HTML. The documents also

indicate that Explorer 5.0 will support XML (Extensible Markup Language) and will extend the capabilities and accessibility of both Cascading Style Sheets and Dynamic HTML.

The new version of Explorer will also allow other developers to create what Microsoft calls "browser-less applications"—Internet applications built from HTML, ActiveX, and Java that don't use the standard browsing-software interface. However, bear in mind that Microsoft maintains separate development teams for its Macintosh products, and the existence of a feature on the Windows side is no guarantee that the feature will appear in the next Mac version.

graphics

Vendor Brings AppleScript to Photoshop

PHOTOSCRIPTER ALLOWS
AUTOMATED IMAGING

by Stephen Beale

Adobe Photoshop has long been among the primary graphics tools for publishing professionals. However, through all the program's many revisions, it has never supported AppleScript. You could automate many Photoshop functions by using the Actions feature, introduced in version 4.0, but this was only a partial solution for publishers looking for the customization that only a full scripting language can provide.

Publishers may now have the answer in Photoscrafter, a Photoshop plug-in from Main Event Software (202/298-9595, www.mainevent.com) that brings AppleScript support to the popular image-editing program. When you run the plug-in, it presents a dictionary of AppleScript commands that represent 75 to 80 percent of Photoshop functions. You can then write scripts that automate these functions.

More Action Photoshop's Actions feature provides a simple way to create macros that automate repetitive operations. But scripts created in Photoscrafter can go much further. Because AppleScript supports such programming techniques as loops and conditional branches, you can write scripts that intelligently process images. For example, you could write a script that scales images by 50 percent

unless they are smaller than 400 by 300 pixels.

AppleScript's other big advantage is its ability to communicate across multiple applications. Many publishers have created custom production environments with scripts created for QuarkXPress. With Photoscrafter, publishers can now incorporate Photoshop into these custom workflows.

A Few Hiccups Photoscrafter does have some limitations, primarily the 20 to 25 percent of Photoshop functions that it does not support. You can't control tool settings, most preferences, or features accessed through the Print dialog box. You can control filters and other plug-ins that are installed with Photoshop, but third-party filters, such as those from Extensis and Alien Skin, are not supported—at least for now.

Photoscrafter is scheduled to ship by the time you read this. Final pricing has not been set, but Main Event will offer it for \$299 under an introductory promotion.

display

Projectors Get Slimmer and Cheaper

NEW MODELS INCLUDE

A 4.9-POUND UNIT

by Michael Gowan

Forget the slides. The latest multimedia projectors are lighter, smaller, and less expensive than ever before. One vendor, Lightware (503/641-7873, www.lightware.com), plans to ship a 4.9-pound projector this November, and InFocus (503/685-

8888, www.infocus.com) has announced a slightly heftier unit that pumps out 700 ANSI lumens for added brightness.

New projectors from Boxlight (360/779-7901, www.boxlight.com), Sanyo (818/998-7322, www.sanyoelc.com), Sharp (201/529-8200, www.sharp-usa.com), and CTX Opto (408/541-6060, www.ctxopto.com) weigh in at about 10 pounds, and the heavyweights of the bunch—the PowerLite 5300, from Epson (310/782-0770, www.epson.com)—is still a relatively svelte 13.7 pounds. All of these projectors offer 800-by-600-pixel resolution.

A New Beetle The Lightware projector—code-named Beetle—achieves its slim dimensions by using a single 1.6-inch LCD panel. The \$2,995 unit produces 400 to 500 ANSI lumens, suitable for most low-light conference rooms.

If you want something brighter—and don't mind if it's a little heavier—In Focus's \$5,999, 6.8-pound LP425 produces 700 ANSI lumens using Texas Instruments' digital light-processing technology, an alternative to the LCDs used in many other projectors.

Triple Triple Three new projectors—each sporting a trio of 0.9-inch LCD panels for added brightness—weigh in at just under 10 pounds. Boxlight's CP10T—tentatively priced at \$4,399 at press time—produces 600 ANSI lumens and features a built-in PCMCIA slot, allowing you to store your presentation on a PC Card. Sanyo's \$6,995 PLC-SU10N also has a PCMCIA slot; the projector produces 550 ANSI lumens. Sharp's \$6,295 Notevision4 produces 600 ANSI lumens.

Budget-conscious presenters who don't mind some extra heft may want to look at the \$2,995 EzPro 585, from CTX Opto, which weighs slightly more than 10 pounds. Due this November, the projector uses a single-panel, 6.4-inch LCD and has a brightness of 500 ANSI lumens.



Lightware's Beetle weighs 4.9 pounds.

High Lumen-essence If brightness is more important to you than a slim design, check out Epson's 13.7-pound PowerLite 5300, which produces 1,200 ANSI lumens. It is scheduled to ship this October for \$8,499.

graphics

Adobe Grows Web Turf with ImageStyler

SOFTWARE BASED ON ILLUSTRATOR TOOLS

by Stephen Beale

Adobe Systems recently announced new versions of PageMill and Illustrator and used the Seybold San Francisco show to preview K2, its next-generation page-layout program. But the graphics-software giant—smarting from poor financial performance and an aborted takeover bid by Quark—has

provided the biggest hint of its long-term product strategy with the introduction of ImageStyler, a \$129 program that brings Illustrator-like capabilities to Web-graphics creation. It is scheduled to ship by year's end.

For Business Targeted at what Adobe describes as the creative business user, ImageStyler makes it easy to create and modify such standard Web-site elements as buttons, navigation bars, and ad banners. Many of these objects are used multiple times in a Web site; much of ImageStyler's power lies in the program's use of object styles to simplify updating of such repeating elements.

The styles define the look of the object and can include a wide range of attributes: color, gradients, opacity, texture, 3-D effects such as bevels and embossing, and distortion effects such as swirl and spherize. You can apply these attributes in any combination on up to five layers, which can be copied from one style to another.

Once you've applied the styles to your graphics, you can quickly change the look of an entire Web site by modifying the style or applying different styles to the objects. The package includes more than 100 preset styles.

Simple JavaScript ImageStyler also makes it easy to create JavaScript rollovers in which buttons change their appearance based on mouse actions. You simply define the graphic's appearance for the mouse-over or mouse-down actions, and the program creates an HTML page with the appropriate JavaScript code. The program also eases creation of image maps with embedded HTML links.

Once you've defined your graphics, you can export them—with optimized color

continues

Transparent Illustrator As Adobe prepares to ship Illustrator 8.0, software vendors are fast on its heels with plug-ins that add transparency capabilities to the illustration program. Hot Door's (530/274-0626, www.hotdoor.com) \$39 **Transparency 1.0** changes Illustrator art into live transparency lenses. Lucid Dream Software's (847/202-8424, www.luciddream.com) \$45 **TransparencyFX 2.0** lets you create lens effects between two objects; lenses in the previous version worked only with placed images. The software also creates transparent masking effects.

Pantone's (201/935-5500, www.pantone.com) **ColorReady** is a \$139 color-management package consisting of a QuarkXTension for QuarkXPress, a plug-in for Illustrator, and an Xtra for Macromedia FreeHand. Each plug-in provides a color-preview window showing how spot colors will look before they are printed.

Migrating Macs Miramar Systems' (805/966-2432, www.miramarsys.com) **PC Migrator** is an \$89 file-transfer utility for PC MacLAN. It moves Mac files to a Windows 95, Windows 98, or Windows NT computer, attaching appropriate extensions and deleting illegal characters en route.

Native Norton It's PowerPC-native and it's here. Symantec (541/334-6054, www.symantec.com) is shipping **Norton Utilities 4.0 for Macintosh**, a long-awaited

continues

upgrade to the new 5 disk-repair utility that supports Apple's new HFS+ format. The current release requires a PowerPC CPU; Symantec says it will ship a version for 68040 systems by year's end.

Milder Commotion Puffin Designs' (415/331-4560, www.puffindesigns.com) **Commotion LE** is a stripped-down, \$795 version of Commotion, the company's \$2,495 video-painting software. It includes the painting, cloning, and video-playback features of its high-end sibling but lacks the latter's wire-removal tool, complex rotosplines, and motion-tracking functions. It's also limited to a maximum frame resolution of 768 by 576 pixels.

Store More SyQuest (510/226-4000, www.syquest.com) announced a SCSI version of its 1GB **SparQ** removable-cartridge drive and said that it plans to ship the previously announced SparQ USB drive this November. Each drive sells for \$249; a three-pack of 1GB cartridges sells for \$99.

Font Fixer Insider Software (760/804-9900, www.insidersoftware.com) has replaced Font Box, its font-maintenance utility, with **FontAgent 2.7**. The new version lets you recover unstable font sets and provides hot links to the company's Web site for the latest documentation and technical support. The standard single-user version costs \$69.95. The \$29 Limited Edition analyzes fonts on a single hard drive.

—EDITED BY MICHAEL GOWAN

palettes—in a variety of image formats. You can also export entire layouts as HTML pages for editing in Adobe PageMill or another authoring tool.

Following on the heels of ImageReady—a \$299 image-creation program based on Photoshop—ImageStyler is Adobe's latest attempt to leverage its key software assets for the production of Web graphics. As the company struggles to improve its financial performance, don't be surprised to see similar attempts in the future.

storage

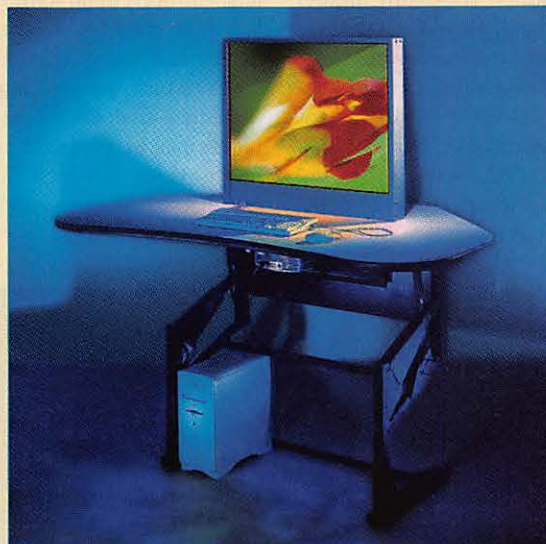
New SCSI Standard Introduced

ULTRA160/M SCSI TO DOUBLE DATA SPEED

by Macworld Staff

The computer industry may be buzzing with talk of FireWire and the Universal Serial Bus (USB), but there's still life in one of the tried-and-true hardware interfaces: SCSI. A group of well-known peripherals vendors has announced support for Ultra160/m SCSI, a new standard that promises up to twice the speed of Ultra2 SCSI, currently the fastest version of the technology.

Ultra160/m SCSI—the number stands for the interface's maximum throughput of 160MB per second—is an implementation of the Ultra3 SCSI standard recently ratified by the SCSI Trade Association. Vendors announcing support for Ultra160/m SCSI include Adaptec, Fujitsu, Hewlett-Packard, LSI Logic, and Quantum. Ultra160/m SCSI is



Workstation Features Rear-Projection Display

YOU'VE HEARD OF REAR-PROJECTION TELEVISION, BUT a rear-projection computer display? The \$7,495 Collaboration Station, from Lumavision Display (650/917-1144, www.display.com), combines a height-adjustable, 72-by-48-inch desktop with a 40-inch-diagonal rear-projection screen driven by the InFocus LP425 LCD projector. Designed for use by artists working in collaboration, it can be outfitted with optional speakers and LCD monitors. The display offers 24-bit, 800-by-600-pixel resolution and also runs video from DVD drives, VCRs, or other sources. The projector can be removed for use as a stand-alone presentation device.—MACWORLD STAFF

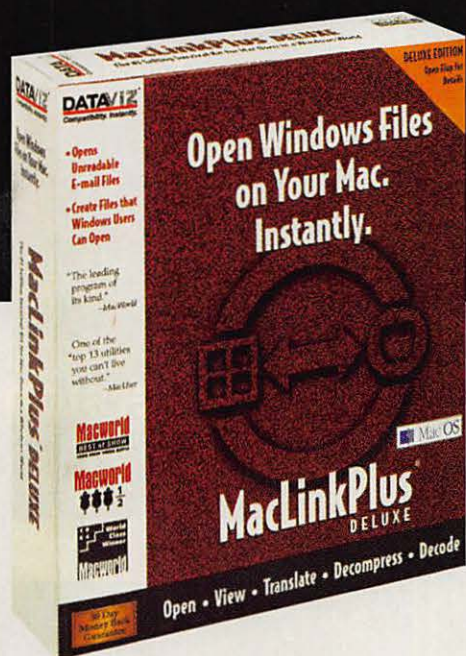
a subset of Ultra3 SCSI, but given its critical mass of support, the former is likely to become the industry's preferred implementation. The first Ultra160/m SCSI products should appear by 1999.

Ultra160/m SCSI has three key features: double-transition clocking, which increases data-transfer speeds by utilizing the connection more efficiently; cyclical redundancy checking, which improves data protection; and domain validation, which provides a way of testing storage networks. The latter feature will enable vendors to develop products that intelligently scale their performance to the network's capabilities; if the network appears unreliable, an Ultra160/m

SCSI device can reduce transmission speed to ensure accurate data throughput. The interface is backward compatible, so you'll be able to run current SCSI devices with future Ultra160/m SCSI boards.

Apple's Take Apple has committed to FireWire and USB as its future hardware interfaces—the former for peripherals that require high-speed data transfer and the latter for most everything else. So don't expect to see Ultra160/m SCSI as a built-in feature for your Mac. However, you can expect that vendors will introduce Ultra160/m SCSI PCI cards that enable Macs to use forthcoming storage devices that support the new standard.

Surviving in a Windows world just got easier.



Upgrade to award-winning MacLinkPlus® Deluxe 10.0.

Being a Mac user in a Windows world can be a pain. But with MacLinkPlus Deluxe 10.0, it couldn't be easier. Just double click on a Windows file or use the sleek, new user interface and your pain is gone.

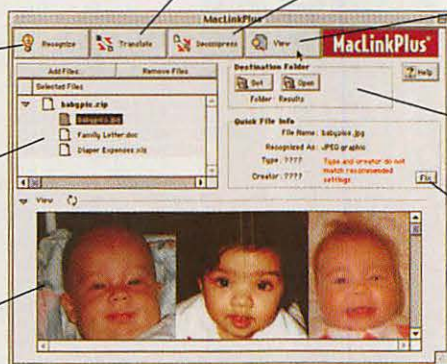
Translate the latest Windows files into Macintosh formats – or vice versa. Translate one file or a whole folder full of files at once. Files retain their original formatting.

Decompress files created using popular compression formats, including Stuffit, Compact Pro, Zip, Gzip and Z.

Get important information on selected files, such as file format, size, creation & modification dates.

Select a file or group of files to recognize, translate, decompress or view.

View files quickly, without opening the application that created them.



View the text of word processing and spreadsheet files without opening the original applications.

Select a folder for translated documents. Then open this folder and access translated documents with just one click!

Files with incorrect Types & Creators cause problems when double-clicked. Solve problems simply by clicking "Fix" then double-clicking the file to open it in the proper application.

The #1 selling survival kit for Mac users in a Windows world just got better. Isn't it great to know there's a software company as committed to Mac as you are?

For more information and to order, call 1-800-270-0030 ext.133.

Visit our Web site at www.dataviz.com/easier

Macworld
BEST of SHOW
1998 NEW YORK EXPO

Also available at fine retailers including:

COMPUSA
THE COMPUTER SUPERSTORE

MICRO CENTER
THE COMPUTER DEPARTMENT STORE

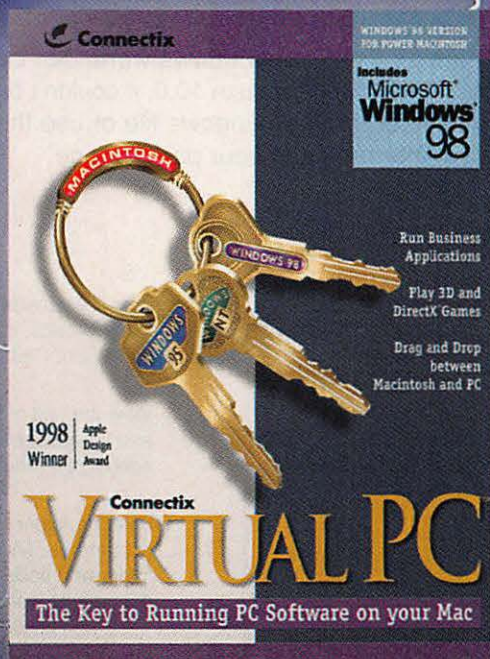
Fry's
ELECTRONICS

DATAVIZ
Compatibility. Instantly.

© 1998 DataViz, Inc. All names are trademarks or registered trademarks of their respective companies.

Choose 102 at www.macworld.com/getinfo

Got iMac?



Available in 3 versions

DOS

Windows 95

Windows 98

Now your iMac can do Windows™

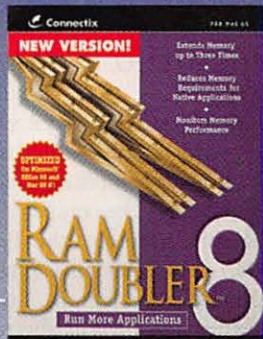
Get the best of both worlds! Use the Mac you love *and* the PC software you need. With Connectix Virtual PC, you can run the latest PC software, including business, games and home applications, on your iMac.

Get Connectix!

All Mac OS 8.5 compatible

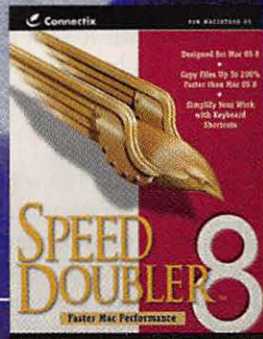
RAM Doubler 8 allows you to run OS 8 and the Microsoft Office™ 98 suite on a standard iMac—without the hassle of adding more memory.

RAM Doubler 8



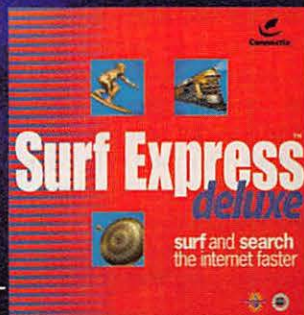
Accelerate your iMac and increase your productivity! Speed Doubler 8 delivers faster file copying and keyboard shortcuts to minimize repetitive tasks.

Speed Doubler 8



New Surf Express Deluxe lets you surf and search the web faster. It's the only internet accelerator that works with all the leading browsers that are pre-installed on your iMac.

Surf Express Deluxe



Reviews

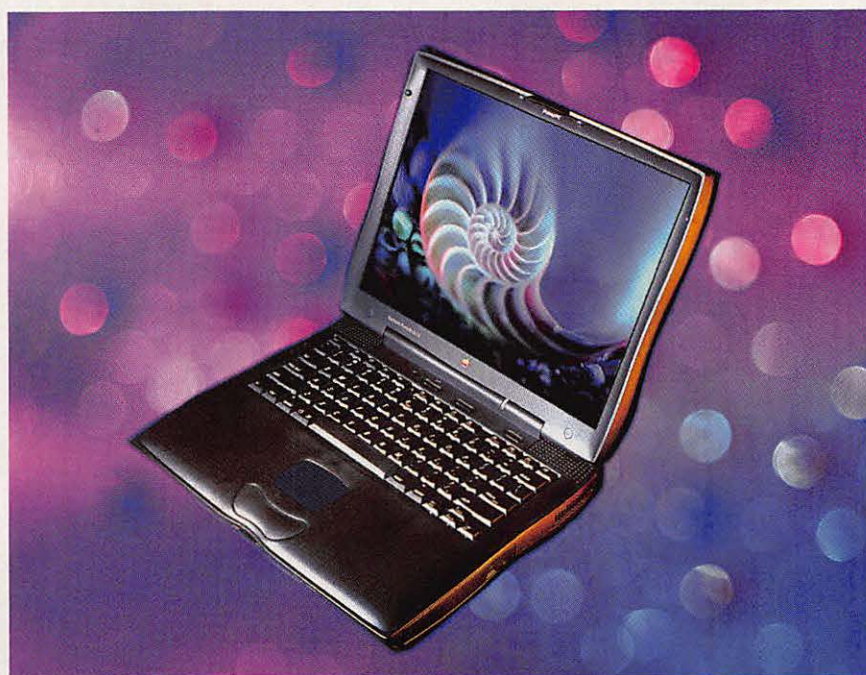
PowerBook G3/300

DVD ADDS NEW DIMENSION
TO HIGH-END PORTABLE

APPLE MIGHT HAVE STUMBLED onto the next killer feature for mobile computing: the portable cinema. The company's new flagship portable, the PowerBook G3/300, offers several nice improvements over previous Mac laptops. But the most exciting new feature is hardware and software that lets you play off-the-shelf DVD movie titles. For a hardened road warrior, nothing could be sweeter than popping a favorite movie in your PowerBook the next time you have to suffer a cross-country flight in coach class.

Marquee Performance

The PowerBook G3/300, which represents the high end of the portable line, is the only Apple notebook bundled with a DVD-ROM drive and an MPEG PC Card, both of which are needed to run DVD movies. If you have a different PowerBook G3 model, you'll need to buy a DVD kit for movie playback, and none were available as we went to press, even though one is on Apple's price list for \$499. Due to supply constraints, Apple suspended the build-to-order option for PowerBooks at least until October, but the company says it does not plan to offer the DVD kit separately at that time. Once the kit ultimately does become available, it will work with all PowerBook G3 models introduced since last May—as long as they have an active-



SUZANNE ROADY

matrix display. (Passive-matrix screens can't properly support DVD due to their lower refresh rates.)

Luckily, this PowerBook configuration is an exceptionally good value: a 300MHz PowerPC G3 with a 1MB backside cache; an 8GB hard drive; 64MB of RAM; 4MB of SDRAM for video; and, of course, the DVD-ROM drive and MPEG PC Card—all for \$4,999. Compare this with the same configuration of the 292MHz G3 portable that this machine replaces, which cost \$600 more and didn't include the DVD kit.

You also get a supersharp, 14.1-inch, color, active-matrix screen, which will now be standard equipment on all new PowerBook models except for one under-\$2,000 "value" configuration with a 12-inch passive-matrix screen. (Apple has also boosted performance on the low end of the line by adding a much needed 512K backside cache to the 233MHz PowerBook G3.)

As for the DVD capability, you have to see it to believe how great a movie can look played back full screen on the PowerBook's active-matrix display. Video

REAL PRODUCTS
REAL RATINGS

Reviews you can trust: Macworld rates only final shipping products, not prototypes. What we review is what you can actually buy.

OUTSTANDING: ★★★★★

VERY GOOD: ★★★★

GOOD: ★★★

FLAWED: ★★

UNACCEPTABLE: ★

purists may find fault in the modest pixel interpolation required to take native DVD resolution up to the PowerBook's full 1,024-by-768-pixel display, but you always have the option of shrinking the image down to 720 by 480 pixels.

Of course, playing a movie won't do you much good if the battery runs out during the cliffhanger, which might happen if you don't manage your power wisely. In tests where virtual memory was on and the hard disk stayed spinning, battery life fell short of 1½ hours. But with virtual memory off, we could eke out two hours, enough for most full-length movies. However, we noticed occasional video stuttering as the hard drive accessed vital routines.

One solution to the power drain would be to put the laptop to sleep and pop in a fresh battery, but this doesn't work because the Apple DVD Player quits if you invoke the sleep option. Luckily, the DVD software lets you jump directly to a scene, so you can get pretty close to where you left off, should you need to switch batteries. However, this works only if the DVD title supports scene selection.

Despite the inability to put a movie to sleep, Apple's DVD software is easy to use and supports all major DVD features, including subtitles and second audio-program tracks.

Speeds and Feeds

The PowerBook G3/300 also supports resolution switching, another standard feature on new Apple laptops. Instead of being locked into the single 1,024-by-768-pixel resolution of the previous G3 PowerBook models, the new portables can reset the built-in display to 800-by-



No Rest Apple's DVD Player software supports all major DVD features, but you can't put your movies to sleep.

600 or even 640-by-480 resolution. However, the PowerBook's antialiasing (pixel smoothing) is fairly primitive and leaves images at these lower resolutions looking somewhat out of focus. Whatever you do, don't combine lower resolutions with DVD video—the results aren't pretty.

We saved CPU performance for last because it is the least-interesting improvement on this model. While Apple kicked up the processor speed from 292MHz to 300MHz, it reduced the bus speed from 83MHz to 66MHz. The result is largely a performance wash (see "Faster by a Nose").

A couple of other nice performance tweaks: as on the iMac, Apple has added support for the V.90 protocol to the modem built into all new PowerBooks. In our tests, the modem could more consistently make faster connections than could older modems following the

K56flex protocol. (Apple plans to offer a software patch for download from its Web site so you can upgrade older modems to V.90.) Apple has also added ATI's latest low-power 3-D-acceleration chip set, Rage LT Pro. This, combined with the built-in 4MB of video RAM, makes for pretty snappy portable game play.

Macworld's Buying Advice

Being a mobile-computing aficionado and a movie buff who's already invested heavily in the DVD format, this reviewer greeted the arrival of the new DVD-equipped PowerBook with a mixture of joy and cha-

grin. Joy, because no product could be better suited to his travel needs than a DVD theater that fits in a briefcase. Chagrin, because like any good PowerBook fanatic, he had already bought a high-end PowerBook without DVD.

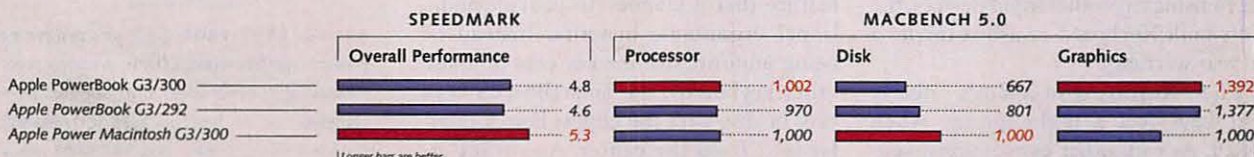
However, sore feelings aside, the new PowerBook is a good step forward for a product that was already at the top of its class in price and performance. For some high-end users, the DVD alone will justify buying a new PowerBook G3/300 and passing your DVD-less notebook down the company food chain.—ANDREW GORE

RATING: ★★★★★ **PROS:** Built-in DVD; many minor improvements; a good value compared with the model it replaces. **CONS:** Can't put DVD movies to sleep; lower resolutions cause slight blurring. **COMPANY:** Apple Computer (408/996-1010, www.apple.com). **LIST PRICE:** \$4,999.



Faster by a Nose

Best results in red. Reference systems in *italics*. SpeedMark scores are relative to that of a Power Mac 7100/80, which is assigned a score of 1.0. MacBench 5.0 scores are relative to those of a Power Mac G3/300, which is assigned a score of 1,000 in each test.



Behind Our Tests

For SpeedMark testing, the desktop system was set to 832-by-624-pixel resolution, giving that system an advantage over the PowerBooks, which were set to 1,024-by-768-pixel resolution. For MacBench testing, the

desktop system was set to 1,152-by-870-pixel resolution. For detailed information on our tests, see www.macworld.com/tests/.—Macworld Lab testing supervised by Kristina DeNike

Replacement Keyboards

KENSINGTON, DATADESK OFFER INPUT ALTERNATIVES

DESPITE ALL THE PUBLICITY surrounding the potential health risks of computing, most people don't give more than a passing thought to choosing a new or replacement keyboard for their Macintosh. That's a shame, because keyboards are probably responsible for the lion's share of computer-related injuries (see "Occupational Hazards," November 1998).

Although they're not meant to directly compete with each other, two new keyboards from Mac-peripheral veterans Datadesk Technologies and

feet at the back of the keyboard let you tilt it upward slightly; unfortunately, this position only accentuates the bend in your wrists, adding to the strain. (To be fair, these drawbacks are shared by all conventional keyboards. And to Kensington's credit, the brief manual includes a helpful section on workspace ergonomics and proper typing technique.)

Split Layout

Datadesk's SmartBoard is designed to overcome the deficiencies of conventional designs like that of the Keyboard-in-a-Box, although there's no guarantee that ergonomic keyboards can prevent or lessen injury.

The most obvious difference is the setup of the keys: instead of being arranged in horizontal rows, they're split into two groups that are angled away from each other. This odd-looking layout, popularized by Microsoft's Natural Keyboard, helps you keep your hands and forearms in a straight line when you're typing, which minimizes the strain on your wrists. The two groups of keys

are also angled slightly upward at the center, which allows your arms to assume a more natural position.

Unlike those of most keyboards, the SmartBoard's fold-down feet—Datadesk calls them Wrist Levelers—are located at the front, so they tilt the keyboard backward slightly when they're deployed. Negative tilt minimizes bending at the wrist, which may help prevent some computer-related injuries.

Unique Keypad

The SmartBoard sports another unusual feature that is claimed to provide additional ergonomic benefits. Instead of being uniform, like the key caps on most other keyboards, the SmartBoard's keys vary in size, with the largest keys located farthest from the center. According to Datadesk, this makes it easier to type on the SmartBoard than on conventional or other split keyboards. Although I wasn't able to verify this specific claim, the

SmartBoard was easier on my hands and wrists than other keyboards I've used.

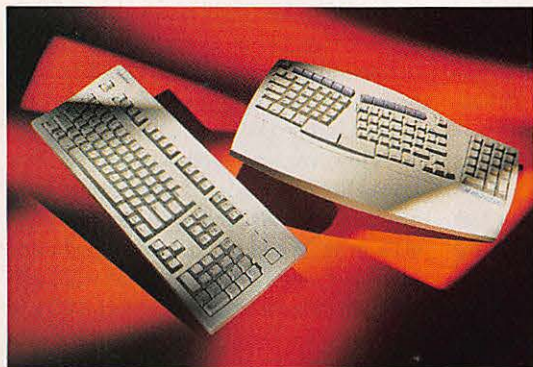
Alas, the SmartBoard also differs from standard keyboards in a few annoying respects. For example, there are only 12 function keys, so you'll need to find a workaround if any of your applications require F13 through F15. The power key is located at the bottom left of the keyboard: it's easy to hit it accidentally, bringing up the Mac OS shutdown dialog box.

It also took me a while to find the +/- key at the top right of the keyboard, instead of in its customary place next to the delete key. (According to Datadesk, the SmartBoard's unusual key placements were necessary to keep the keyboard's footprint small enough for the keyboard to fit on standard keyboard trays. The SmartBoard is actually an inch narrower than the Keyboard-in-a-Box.)

Like most other unorthodox keyboards, the SmartBoard has a definite learning curve—it took me more than a week to work back up to my usual typing speed. If you use a SmartBoard at home and a standard keyboard at the office—or the other way around—you may find it hard to switch back and forth every day.

Macworld's Buying Advice

At a street price of close to \$50, Kensington's Keyboard-in-a-Box is a good choice if you're in the market for an inexpensive full-size keyboard. But if you're dissatisfied with your conventional keyboard for any reason, the SmartBoard—its few quirks notwithstanding—is well worth considering.—FRANKLIN TESSLER



Keyboard-in-a-Box (left) and the SmartBoard

Kensington Technology Group illustrate the range of choices available.

Generic Input

True to its name, Kensington's Keyboard-in-a-Box offers a no-frills option for people on a budget who need a full-size keyboard. The keyboard sports a row of 15 function keys across the top, a numeric keypad at the far right, and a standard complement of cursor-control and page-navigation keys in between. The supplied six-foot cable connects the Mac to an ADB jack on either side of the keyboard. Like Kensington's other input devices, the solidly built Keyboard-in-a-Box carries a five-year warranty.

The Keyboard-in-a-Box's nearly silent keys feel a trifle spongy when pressed. As with other conventional keyboards, the Keyboard-in-a-Box's keys are laid out in neat rows that tend to make your palms angle upward as you type, which puts stress on your wrists. Plastic

Keyboard-in-a-Box

RATING: ★★★½ **PROS:** Inexpensive; five-year warranty. **CONS:** Spongy key response; traditional design accentuates wrist strain. **COMPANY:** Kensington Technology Group (650/572-2700, www.kensington.com). **LIST PRICE:** \$90.

SmartBoard

RATING: ★★★ **PROS:** Ergonomic design may prevent repetitive strain. **CONS:** Unconventional location of +/- and power keys; does not have complete set of function keys. **COMPANY:** Datadesk Technologies (206/842-5480, www.datadesk1.com). **COMPANY'S ESTIMATED PRICE:** \$100.

Get a new Mac for \$99.





Introducing our most powerful Macintosh yet.

(Shown actual size.)

You only get one brain per lifetime. Unless, of course, you're a Macintosh[®] computer. In which case, you can now trade up in a very big way.

The new Mac OS 8.5 is here. For only \$99*, it's an affordable way to give your PowerPC™-based Mac a higher level of intelligence.

Just how advanced is Mac OS 8.5? For starters, it's the world's most Internet-savvy OS. With the power to hunt down information around the world using multiple Internet search engines simultaneously.

It's now up to five times faster than its predecessor. With the ability to zap huge files across a network faster than Windows NT.**

It's just plain smarter. With a host of intelligent features to streamline and automate the things you do every day.

Best of all, it's easy. Double-click the install icon, and in less than 15 minutes†, you've got a whole new Macintosh.

Mac OS 8.5: Starring Sherlock

Remember the ever-useful
“Find” feature? Now it’s
infinitely more powerful.

In Mac OS 8.5, we call it
Sherlock™—because,
at your request, it
relentlessly digs
up information
wherever it’s hiding.

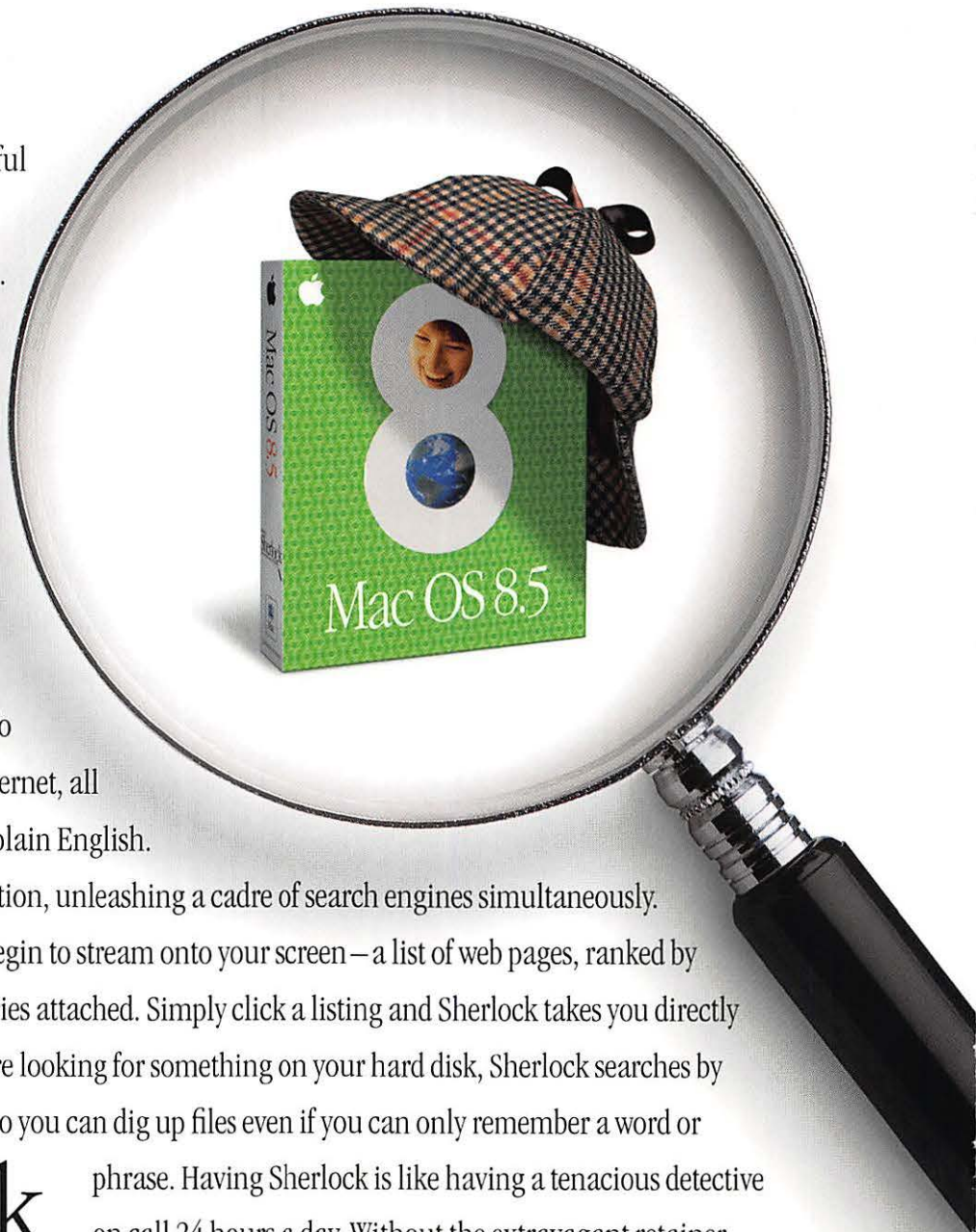
On the Internet or deep
inside your hard disk. To
find anything on the Internet, all
you have to do is ask in plain English.

Sherlock springs into action, unleashing a cadre of search engines simultaneously.
In seconds, the results begin to stream onto your screen — a list of web pages, ranked by
relevance, with summaries attached. Simply click a listing and Sherlock takes you directly
to that web page. If you’re looking for something on your hard disk, Sherlock searches by
content as well as title. So you can dig up files even if you can only remember a word or

Sherlock



phrase. Having Sherlock is like having a tenacious detective
on call 24 hours a day. Without the extravagant retainer.



your personal search detective.

1.

Enter your request.

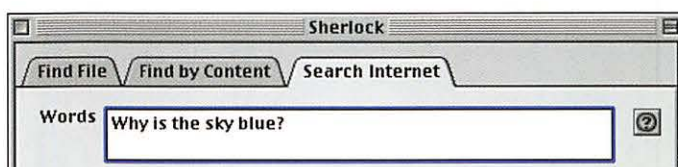
Looking for specific information?

Need some answers fast? Sherlock

is smart enough to understand the

most advanced search language on earth: English. There's no need to bother with symbols or quotation marks. Simply

enter a key word or phrase—Sherlock takes your cue and instantly springs into hot pursuit.



2.

Sherlock searches for clues.

At Sherlock's command are some of the world's most powerful Internet search engines, all working simultaneously.

You don't even have to open your web browser—just a single click sends Sherlock into action. And in about the time it took you to read the last sentence, the results start pouring onto your desktop.

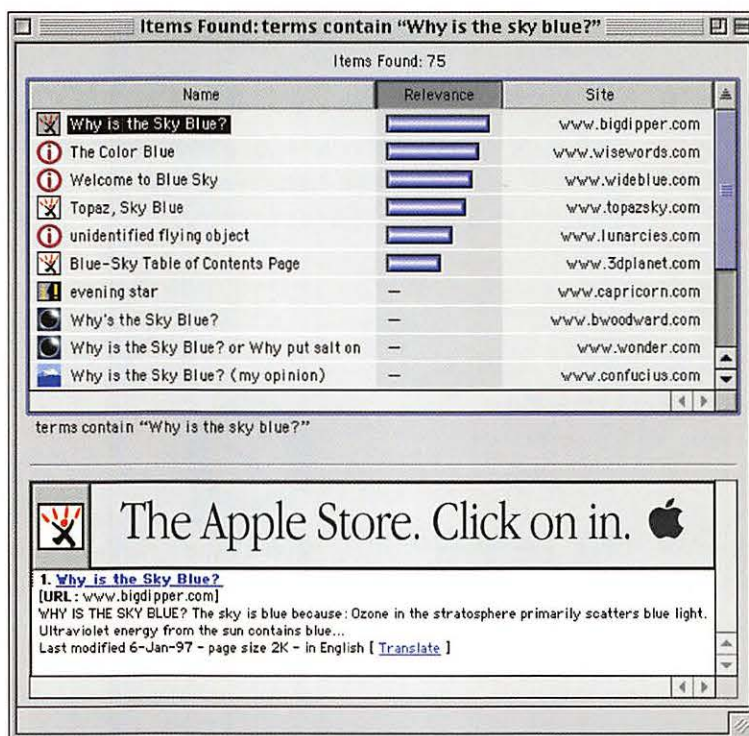


3.

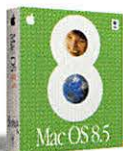
Sherlock reports back.

Sherlock is meticulous.

As your search results begin to come in, they're organized in a tidy list—dynamically sorted by relevance. And every item is just a double-click away. If the item is on a list of web pages, for example, Sherlock will open your browser and take you there posthaste. If the item is on a list of documents in your computer, Sherlock will, at your request, either summarize it or open it. Case closed.



Inside every PowerPC Mac, there's



*Cut down on the foot-tapping and finger-drumming while you wait for your gargantuan files to copy across the network. With Mac OS 8.5, network copying is twice as fast as Mac OS 8.1 and about 20% faster than Windows NT.**

AppleScript™ is now fully native and optimized for the PowerPC processor—running scripts up to five times faster than before. You can script all kinds of new things, including printing, Sherlock, ColorSync™ and network configuration. You can even attach a script to a folder, so dropping a document onto a folder automatically does your work for you.



AppleScript

A Mac OS 8.5 supports anti-aliasing for TrueType® fonts, which smoothes the “jaggies” that sometimes appear along the edges of font characters. A textbook example of great-looking text.

Never set your clock again. Mac OS 8.5 will automatically synchronize your Macintosh over the Internet with the world's most accurate timepieces. Heck, it will even automatically adjust your Mac's clock for daylight saving time to keep you in sync with the world.



QuickTime™

Mac OS 8.5 comes complete with the gold standard of multimedia: QuickTime® 3. In fact, we've even included the upgrade to QuickTime 3 Pro (a \$29.95 value), so you can do cool things like save and edit the video images you download from the web.



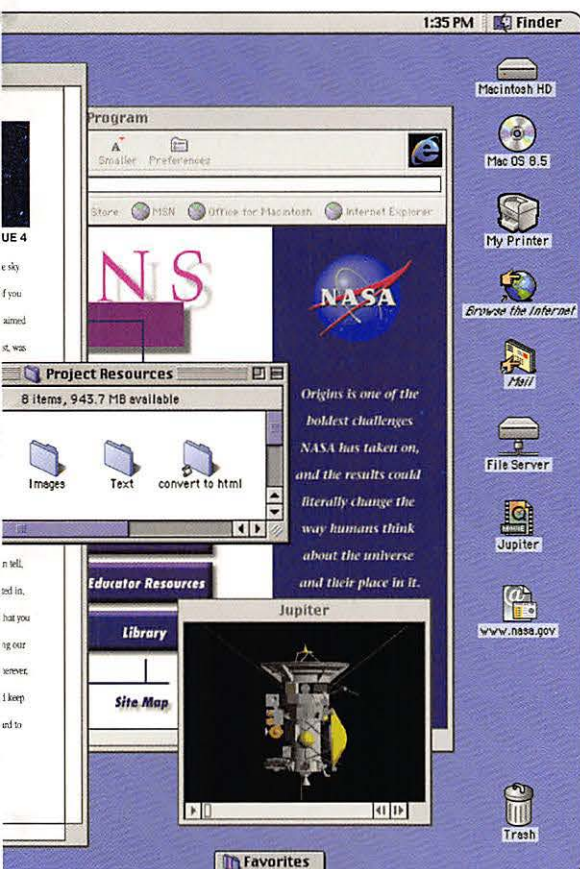
Mac OS 8.5 puts a powerful new Mac inside the Macintosh you already own. So almost all of your applications will run better.

To get you started on the Internet quickly, Mac OS 8.5 comes complete with 30 days of free access via EarthLink (and an easy way to sign up). It also includes both Microsoft Internet Explorer and Netscape Navigator™ for browsing and Outlook Express for access to e-mail and newsgroups.



EarthLink™

a new Mac waiting to burst out.



You'll see improvements in the things you do every day, from scrolling and printing to searching, copying and e-mailing.



www.apple.com If you think turning documents and applications into "aliases" was a great time saver, wait until you try it with URLs, web links and e-mail addresses. Drag any of these things to the desktop and you'll create an alias—ready to whisk you to a web site or open a pre-addressed e-mail message.



The answer to the age-old question, "Where am I?" Mac OS 8.5 makes it easy to tell which application is active, displaying both the icon and the application name in the menu bar. You can even tear off the Application Switcher and place it anywhere on the desktop for one-click access to all your running apps.



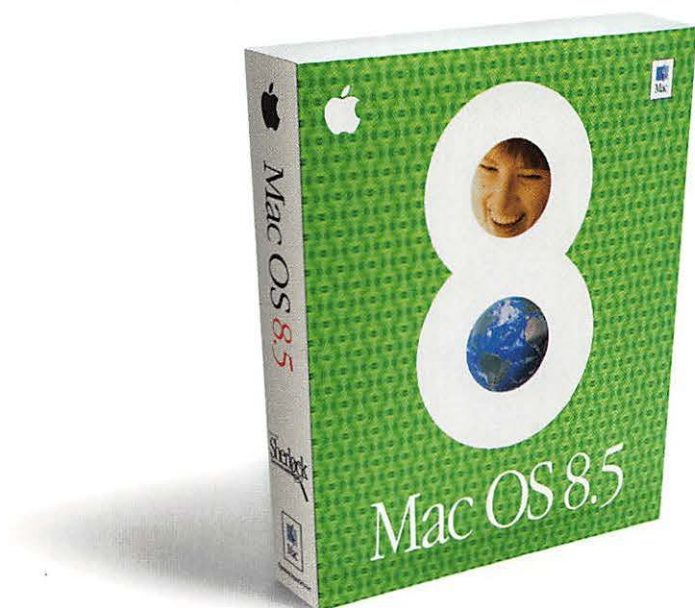
Introducing Smart Scrolling. Now, in any Finder™ window, just a glance at the scroll bar "thumb" tells you what portion of the window contents you're currently viewing. (Coming soon to your favorite applications as well.) Plus, you can position the scroll arrows next to each other, saving lots of extra mouse movements when you scroll up and down.

To keep colors from getting lost in translation from scanner (or digital camera) to screen to paper to web, ColorSync is the undisputed standard. Mac OS 8.5 has the latest version, so you'll be showing your true colors every step of the way.



Now you can rush things into print. Just drag and drop any graphics file—JPEG, EPS, PICT or PostScript™—onto a desktop printer icon and let the printing begin. No application launching. No wasted time.

Perform a brain transplant on your Mac in less than 15 minutes.* Installing Mac OS 8.5 is as easy as clicking the install icon. You can create scripts to perform identical installations on many machines, or use Apple® Network Assistant to install Mac OS 8.5 on remote Macs from the comfort of your desk.



Small investment, big return.

Upgrading a single Mac application is a great way to make one application run better. Upgrading to Mac OS 8.5 is a great way to make almost all your applications run better.

So, at \$99*, Mac OS 8.5 is not only one of the most affordable upgrades you can make, it's by far the best. Whether you're a casual Mac user or a seasoned Mac pro.

Pick up a copy of Mac OS 8.5 for your PowerPC-based Macintosh at your authorized Apple reseller (call 1-800-538-9696 for the location nearest you). Or visit the Apple Store™ at www.apple.com.

It's the fastest, easiest way to get a whole new Macintosh.



Think different.™

*Estimated retail price. Tax not included. Requires Mac OS-based Apple computer with PowerPC processor and 16MB of physical RAM, with virtual memory set to at least 24MB. Apple PC Compatibility Cards not supported. Internet access requires ISP. © 1998 Apple Computer, Inc. All rights reserved. Apple, the Apple logo, AppleScript, ColorSync, the ColorSync logo, Mac, Macintosh, the Mac OS logo, QuickTime and TrueType are trademarks of Apple Computer, Inc., registered in the U.S. and other countries. The Apple Store, Finder, iMac, the QuickTime logo, Sherlock and "Think different" are trademarks of Apple Computer, Inc. Adobe and PostScript are trademarks of Adobe Systems, Inc. Netscape Navigator is a trademark of Netscape Communications Corp. PowerPC is a trademark of IBM Corp. used under license therefrom. D033694

3-D Authoring Tools

INFINI-D 4.5 AND STRATA STUDIO PRO 2.5 DUKE IT OUT

TWO VENERABLE MAC 3-D SOFTWARE packages—MetaCreations' Infini-D and Strata Studio Pro—have for years been dominating the middle segment of the integrated (modeling, rendering, and animation) 3-D market. Their latest upgrades add refinements: Infini-D 4.5 adds more capability to the radically revised interface introduced with version 4.0, and Strata Studio Pro 2.5 adds more depth to the program's existing (and noticeably aging) interface. And although Studio Pro has the edge in final rendering quality, Infini-D now offers a serious price advantage.

Respectable Progress

These upgrades (\$99 to move up from Studio Pro 2.X or Infini-D 4.X) don't threaten to steal any thunder from higher-end offerings such as ElectricImage. But both offer refinements to Infini-D's and Studio Pro's healthy variety of tools, which are fine for production-quality work.

Infini-D's straightforward particle-animation system has been augmented in version 4.5 with real-time previews of selected parameters. You can now designate particles to change color when colliding with objects in a scene and have particles burst into more particles, or "spawn," upon impact. And you can constrain particle systems with deformation fields, to create, for example, particles that appear to be blown by the wind of a fan.

Studio Pro's decent particle-animation system has been enhanced with an implementation of Metaballs, which makes particles appear to melt together—great for simulating fluids such as molten metal. And its new collision-detection feature—which is old news in Infini-D—makes particles appear to ricochet off surfaces.

Studio Pro also now has a deformation lattice, a "distortion field" through which you can pass objects, even when grouped; these are great for creating animations of shapes bending and deforming. Infini-D lacks deformation lattices for grouped objects, but it allows you to apply deformations to single objects, using up to eight of its deformation commands on a single object.

Both programs offer improved

vertex-editing control over mesh objects. Infini-D's tools for editing meshes are slightly superior, as evidenced in its new "magnetic" cursor, which allows you to adjust mesh warping while you edit vertex points.

But when it comes to the critical process of animation, Studio Pro has several advantages over Infini-D, especially for more-demanding tasks such as character animation. Studio Pro's already



Dazzling Dust Strata Studio Pro 2.5 comes with a variety of new special effects, including customizable "pixie dust." This specialized particle system can be attached to any object, allowing it to leave a trail of glowing embers as it moves around the screen.

decent implementation of Inverse Kinematics (IK) has been enhanced with mesh linkage and includes a full complement of tools for creating Bones—linked objects that move together logically.

Surprisingly, Infini-D 4.5 offers absolutely no IK tools of any sort—a major oversight for many types of complex animation tasks, not just character animation.

Rendering Refinements

Rendering is perhaps the most sensitive part of the 3-D creation process, and Studio Pro has some specific advantages over Infini-D, especially in the crucial area of ray tracing. Both programs now offer MIP mapping for textures, which results in noticeably more realistic and smoother image-texture maps. But Infini-D doesn't support MIP modes for ray-traced scenes, reducing the overall quality of images ray-traced with complex texture maps; Studio Pro's MIP mapping works just fine with ray tracing.

On the other hand, Infini-D offers production-oriented users render-

management features plus the option of buying a network-based rendering-software package called BackBurner. Studio Pro has no such capabilities.

A major omission from Infini-D's upgrade is a motion-blur rendering option for animated objects. Granted, Infini-D allows you to apply many Adobe Photoshop and Adobe After Effects filters to specific objects in a scene—a great capability lacking in Studio Pro. This partially makes up for Infini-D's motion-blur deficit and opens the door to many compelling special effects. Regardless, not having motion blur as a built-in rendering option is a major obstacle for creating realistic-looking motion.

Studio Pro's answer to Infini-D's acceptance of Photoshop and After Effects filters is a set of Power Modules, special effects that include fire, smoke, hair, and pixie dust—none of which can be easily created in Infini-D.

Macworld's Buying Advice

Artists already using either 3-D package will find its respective upgrade worthwhile for the enhanced effects. Graphic designers wishing to enter the 3-D realm will find Infini-D to be a more user-friendly and significantly more affordable tool for creating 3-D logo designs and general 3-D animation. Modeling-minded artists will be happier with Strata Studio Pro's more industrial-strength modeling and rendering controls, although the program is not necessarily worth almost three times the cost of Infini-D.—DAVID BIEDNY

Infini-D 4.5

RATING: ★★★★★ **PROS:** Straightforward interface; good particle systems and special effects; network rendering option. **CONS:** Lacks motion blur; no MIP mapping for ray-traced rendering; no Inverse Kinematics; weaker modeling tools. **COMPANY:** MetaCreations (805/566-6200, www.metacreations.com). **LIST PRICE:** \$599.

Strata Studio Pro 2.5

RATING: ★★★★★ **PROS:** Good-quality rendering controls; Inverse Kinematics; extensive variety of special effects. **CONS:** No network rendering option; interface could use an update; higher price. **COMPANY:** Strata (435/628-9756, www.strata3d.com). **LIST PRICE:** \$1,495.

A large, gnarled tree trunk, likely a juniper, dominates the foreground. The wood is heavily weathered, showing a mix of light tan and dark brown tones. A significant portion of the trunk is hollowed out, revealing the internal structure. The tree is set against a backdrop of a sunset or sunrise, with a pink and orange sky. In the distance, another smaller, similarly gnarled tree is visible on a rocky, elevated landscape.

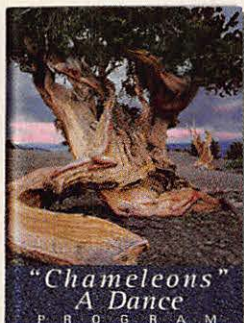
WITH
OTHER
PRINTERS,
YOU SEE
THE TREE.

WITH OUR
PRINTERS,
YOU SEE
THE PEOPLE
IN THE TREE.

YOU'VE GOT TO SEE IT IN

EPSON

COLOR.



Our 1440 dpi is what lets you see them. How many can you find? Two? Three? These amazing dancers are now appearing before your eyes courtesy of another incredible performer. An EPSON Stylus® Color printer with 1440 dpi. No detail escapes it. Even the most subtle, like those on this program cover for a piece called "Chameleons." Of course with other printers, you might see how well these dancers blend in. But with ours, you see how much they stand out. All four of them.

PRESENTING THE WORLD'S FIRST 1440 DPI INK JET PRINTERS.

Only Epson® ink jet printers have the exclusive PerfectPicture™ Imaging System for: 1440 x 720 dpi • Micro Piezo™ technology for a cleaner, more consistent dot • Quick-drying inks • Up to 9 PPM black on the Stylus Color 850 • PC and Mac compatibility • Optional internal ethernet • For more information, call 1-800-GO-EPSON (ask for Operator 3010) or visit www.epson.com.

\$349

Epson Stylus Color 850
Our fastest high-performance business printer.



\$499

Epson Stylus Color 1520
Our versatile wide-format business printer.



Maximum print speed is 9 PPM in economy mode. Additional processing time will vary depending on system configuration, software application and page complexity. Prices may vary. Epson and EPSON Stylus are registered trademarks of Seiko Epson Corp. PerfectPicture and Micro Piezo are trademarks of Epson America, Inc. ©1998 Epson America, Inc.

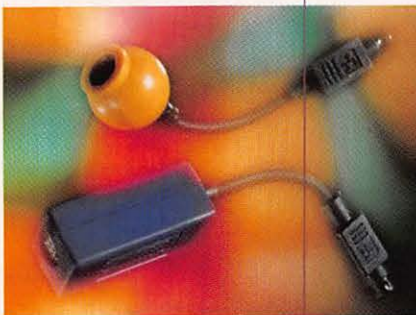
Server-Restarting Devices

MACCOACH 2.0 TROUNCES POWERKEY REBOUND IN FEATURES AND PERFORMANCE

CHANCES ARE, IF YOU'RE RUNNING a Mac as a server, then you're also carefully watching to make sure the system doesn't crash. Two teeny-tiny hardware appliances, Sophisticated Circuits' PowerKey Rebound and MacCoach 2.0, from the Dutch company Neuron Systems, will guard your server by detecting a crashed Mac and restarting it.

Both products use the same technique: a small electronic "watchdog" timer is connected to your Mac's ADB port, and the device automatically performs a keyboard restart if your Mac stops. The gadgets easily plug into your keyboard or mouse port, where they generate your Mac's reboot. The supplied extensions run in the background and probe the appliance at regular intervals. In addition to performing the automated restart function, the products also let you set parameters—such as the frequency of reboots, the amount of time permitted for a reboot, and the number of consecutive reboots—to help prevent restart repetitions.

Both products perform well, but MacCoach 2.0 adds a few thoughtful features. For instance, if an application—rather than



Sophisticated Circuits' PowerKey Rebound (top) and Neuron Systems' MacCoach

your whole machine—crashes, MacCoach 2.0 detects this by catching events from the Mac OS. MacCoach 2.0 then gives you the option of initiating a Finder restart to gracefully quit other applications before rebooting the Mac, which helps avoid data corruption in nonfailing applications. Rebound, on the other hand, can detect application crashes only when the applications are specifically written as Rebound-aware. And it doesn't offer the graceful Finder-restart option. MacCoach 2.0 also

logs crashes—invaluable for diagnosing chronic problems—and publishes the log to a Web site for remote viewing.

Macworld's Buying Advice MacCoach 2.0 and PowerKey Rebound look as if they could be siblings. Physically, these appliances are very similar, and they are even priced the same. But MacCoach 2.0's extra features—graceful restart, logging, and Web output—make MacCoach a clear winner over Rebound.—MEL BECKMAN

MacCoach 2.0

RATING: ★★★★★ **PROS:** Detects crashed applications; Finder-restart option; event log; Web output. **CONS:** No provision for disk formatting. **COMPANY:** Neuron Systems (31-570-519100, www.neuronsys.com). **LIST PRICE:** \$99.

PowerKey Rebound

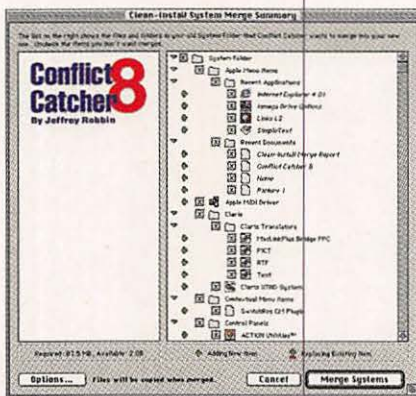
RATING: ★★★ **PROS:** Provides for Rebound-aware application-crash detection. **CONS:** No generic application-crash detection; no event log; no provision for disk formatting. **COMPANY:** Sophisticated Circuits (425/485-7979, www.sophisticated.com). **LIST PRICE:** \$99.

Conflict Catcher 8

MANAGE EXTENSIONS AND MORE

HOW SURPRISING, THE NUMBER of things in life that seem absolutely perfect until something better comes along. Your Power Macintosh 9600, for example, seemed unsurpassably speedy until you fired up a Power Mac G3. And the oranges you loved as a kid now seem bland compared to the marvelous Minneola. Now let's add Apple's Extensions Manager to this list. Casady & Greene's Conflict Catcher 8 is not only more capable than Apple's Extensions Manager but it's also a big improvement over previous versions of Conflict Catcher.

In early iterations, Conflict Catcher did Apple's Extensions Manager one better by allowing you to enable and disable start-up items such as extensions and control panels. In addition, Conflict Catcher automated the process of troubleshooting conflicting start-up items. Later versions of the program added the option of controlling application plug-ins. Conflict Catcher also allowed you to create sets of extensions and control panels you could switch off with a single click, rather than having to disable each one individually.



Merge Right Conflict Catcher 8's Clean Install System Merge feature eases system-software upgrades.

So what could this erstwhile extension manager possibly do for an encore? For starters, version 8 provides the Clean Install System Merge function, which creates a list of items that appear in one System Folder and allows you to choose which items you'd like to move or copy to another System Folder.

That's right, no more rummaging around in your Previous System Folder and manually moving extensions, control panels, contextual-menu items, fonts, and preference files into a new System Folder when you install system software. Just select the

files and folders you wish to move or copy, and click on the Merge Systems button. If you like, you can label items that were originally in the new System Folder as well as apply a different label to files you've moved to this folder.

Conflict Catcher is now Location Manager-savvy, allowing you to switch sets of start-up items with each new location. Version 8 even supports contextual menus: with a control-click, you can trash, show the original of, or change the label of any item in Conflict Catcher's list. You can also switch System Folders on the fly. This is very useful if you have more than one System Folder—OS 8.1 and OS 8.5, for example—on the same disk and want to easily switch between them by having Conflict Catcher 8 "bless" one System Folder or the other.

Macworld's Buying Advice I can't think of a Mac user who wouldn't benefit from Conflict Catcher. If you don't have a copy, buy one. If you have an older version, upgrade.—CHRISTOPHER BREEN

RATING: ★★★★★ **PROS:** A great troubleshooting tool; Clean Install System Merge function is a godsend. **CONS:** None. **COMPANY:** Casady & Greene (831/484-9228, www.casadyg.com). **LIST PRICE:** \$79.95.

© 1995 Omega Corporation. iomega and Jaz are registered trademarks of iomega Corporation. Photoshop is a registered trademark of Adobe Systems, Inc. Prices listed are estimated street prices. Actual prices may vary.

LOST

**IMPORTANT PHOTOSHOP
FILES 1.6 GB**

Project goes by the name "Atlas"

MUST FIND BY 11/18/98

Any information, call
Chuck "Dead Meat" Martin

415-781-3400



It's not just your work. It's your life.

Keep it safe on the Jaz® 2GB drive and disks. It's the fastest performing Jaz drive with twice the capacity as the original. And it works with the millions of Jaz 1GB disks already out there. 2GB drives now priced as low as \$349. Disks as low as \$99. Find a dealer near you or buy online at: www.iomega.com



iomega.

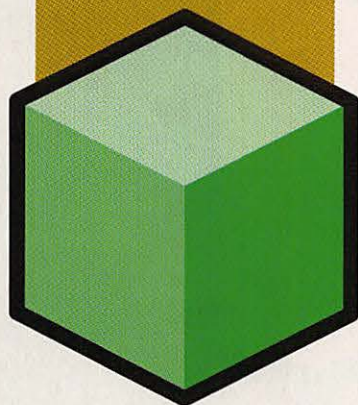
Choose 103 at www.macworld.com/getinfo

N O W

Y O U

C A N

C O D E



Turn your ideas into applications

Whether it's a small utility, a large application or the next great game, REALbasic lets you turn it into a reality. REALbasic is easy for beginners yet powerful enough for professional developers.

Download a FREE trial version at
www.realbasic.com or call
 (512) 292-9988 for more information

 **REALbasic™**

REALbasic is a trademark of REAL Software, Inc.

QX-Tools 4.0

VERSATILE TOOL SET HAS SOMETHING FOR EVERYBODY

QX-TOOLS 4.0 FROM EXTENSIS is a set of seven QuarkXTensions for QuarkXPress 4.03 and higher. Some add new capabilities to QuarkXPress, and others make it easier to use the features already present. You may not like everything, but you'll probably find a few that suit your taste. And you may discover one or two that you can't live without.

QX-VectorEdit lets you open PostScript, EPS, and PDF files created in Adobe Illustrator, Macromedia Free-

predecessor of QX-Tools 4, included.

QX-ItemStyles extends the style-sheets metaphor to items. Using it, you never have to create the same item twice. You can base the styles on existing items or create them from scratch.

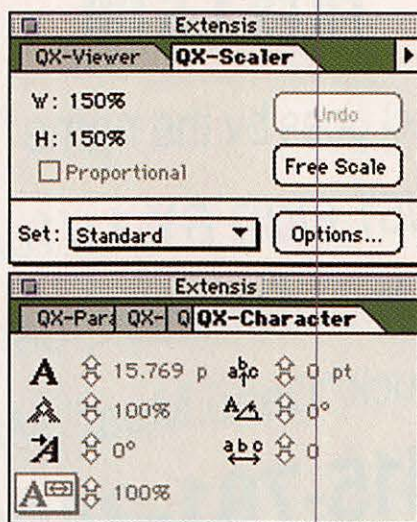
Although QuarkXPress 4 lets you scale grouped items, it doesn't let you specify how individual text and graphic objects within the group are scaled. QX-Scaler lets you control nearly 50 different attributes, including font size, line and frame thickness, and box size. You can resize individual items or groups proportionally or disproportionately by entering horizontal and vertical scaling values, and you can undo scaling operations performed with QX-Scaler, something you can't do with Quark's own resizing function.

Putting on a Different Face

QX-Viewer and QX-FineTune offer handy interface alternatives for several common tasks. QX-Viewer is a palette that provides easy access to all of QuarkXPress's page-display and document-navigation features. QX-FineTune adds four palettes that let you interactively modify many common character, paragraph, item, and anchored-rule attributes.

Macworld's Buying Advice

No matter how you use QuarkXPress or what kinds of publications you produce, you'll find something to like in QX-Tools 4. If there's a downside to the software, it's the absence of several handy features, such as QX-Bars and QX-DocStyles, found in QX-Tools 2. Although most QX-Tools 2 components are compatible with QuarkXPress 4, Extensis recommends against using QX-Tools 2 and QX-Tools 4 together. Even so, if you're looking for a way to beef up XPress, QX-Tools is a good place to start.—JOHN CRUISE




QX-Tool Box QX-Scaler (top) lets you control how items within a group are scaled. QX-FineTune (bottom) lets you quickly modify character, paragraph, and item attributes.

Hand, and other programs. When you open the file, QX-VectorEdit creates a new QuarkXPress document and converts each object into a QuarkXPress item. You can then modify or delete individual items, specify trapping, and so on.

QX-Layers lets you combine several items into a single layer that can be displayed or hidden; printed or not printed; locked or unlocked; or named, deleted, or moved up or down in the stacking order.

Just as the XPress Find/Change feature lets you replace text and text attributes, QX-FindChange lets you find and change item attributes, such as line and frame widths or box backgrounds. Unfortunately, you can't globally find and change colors or find and change colors applied to text—two features that QX-Tools 2, the

RATING:  **PROS:** Diverse set of useful tools; easy-to-use palettes; components are well integrated with QuarkXPress and with each other.

CONS: Not compatible with previous versions of QuarkXPress; some useful features absent or dropped from previous version of QX-Tools.

COMPANY: Extensis (503/274-2020, www.extensis.com). **LIST PRICE:** \$149.95.

If you share the turf with
overgrown predators,
you better develop an eye
for creativity.

Our newest line of prepress and
printer products are thriving
in one of the world's most
competitive environments.

Maybe it's because we're so
well adapted.

- Up to 2400 x 2400 dpi and
line screens up to 175 lpi
- 4-color FilmMaking capabilities
- Registration and dimensional
accuracy with patent-pending
X-ACT™
- A capacity for full-bleed
graphics on oversized output
up to 13" x 35.5"
- The perfect solution for
camera-ready art and proofing
- Up to 20 pages per minute

Call today for more information
on the XANTÉ® Accel-a-Writer® 3G
and FilmStar™ 2.



PREPRESS INNOVATIONS.
1-800-926-8839, ext. 2158
Dealers call ext. 2159
Fax: 334-342-3345
www.xante.com



Adobe® PostScript® 3™

©1998 XANTÉ CORPORATION. XANTÉ, X-ACT, and FilmStar are trademarks or registered trademarks of XANTÉ CORPORATION. Adobe, PostScript, PostScript 3, and the PostScript logo are trademarks of Adobe Systems, Incorporated. Other brands and product names are trademarks or registered trademarks of their respective holders. XANTÉ CORPORATION, 4621 Spring Hill Avenue, Mobile, AL 36608, tel: 334-342-4840, fax: 334-342-3345.

Choose 112 at www.macworld.com/getinfo

STATEMENT OF OWNERSHIP, MANAGEMENT AND CIRCULATION REQUIRED BY 39 U.S.C. 3685

1. Macworld
2. Pub. No. 07418647
3. Date of filing: October 1, 1998
4. Published monthly
5. No. of issues published annually: 12
6. Annual subscription price: \$34.97
7. Known office of publication: 301 Howard St., San Francisco, CA 94105
8. Complete mailing address of the headquarters of general business offices of the publisher: Mac Publishing L.L.C., 301 Howard St., San Francisco, CA 94105
9. The names and address of the publisher, editor, and managing editor are Publisher: Colin C. Crawford, 301 Howard St., San Francisco CA 94105; Editor: Andrew Gore, 301 Howard St., San Francisco, CA 94105; Managing Editor: Claire H. Breen, 301 Howard St., San Francisco, CA 94105
10. The owner is: Mac Publishing, L.L.C., 301 Howard St., San Francisco, CA 94105; ZD Inc., One Park Avenue, New York, NY 10016; Macworld Communications, Inc., 301 Howard St., San Francisco, CA 94105
- The names and addresses of stockholders owning or holding 1% or more of the total amount of stock are listed below. None
11. There are no known bondholders, mortgagees, or other security holders owning or holding 1% or more of the total amount of bonds, mortgages, or other securities.
13. Publication name: Macworld
14. Issue date for circulation data below: October 1998
15. Extent and nature of circulation: Average no. copies each issue during preceding 12 months: A. Total no. copies (net press run), 834,131; B. Paid and/or requested circulation 1. Sales through dealers and carriers, street vendors and counter sales, 79,9942. Mail subscription; (paid and/or requested), 558,758C. Total paid and/or requested circulation (sum of B1 and B2), 638,752 D. Free distribution by mail carrier or other means, samples, complimentary, and other free copies, 15,645; E. Free distribution Outside the Mail, 0; F. Total Free Distribution, 15,645.
- G. Total distribution (sum of C and F), 654,397 H. Copies not distributed: 1. Office use, left over, unaccounted for, spoiled after printing 13,568; 2. Return from news agents, 166,166; I. Total (sum of G, H1 and H2 - should equal net press run shown in A) 834,131. Percent paid and/or requested circulation, 97.61% Actual no. copies of single issue published nearest to filing date: A. Total no. copies (net press run), 688,000; B. Paid and/or requested circulation: 1. Sales through dealers and carriers, street vendors and counter sales, 73,100; 2. Mail subscription (paid and/or requested), 446,300; C. Total paid and/or requested circulation (sum of B1 and B2) 519,400; D. Free distribution by mail carrier or other means, samples, complimentary, and other free copies, 11,806; E. Free Distribution Outside the Mail, 0; F. Total Free Distribution, 11,806; G. Total distribution (sum of C and F), 531,206; H. Copies not distributed: 1. Office use, left over, unaccounted for, spoiled after printing, 294; 2. returns from News Agents, 156,500. I. Total (sum of G, H1 and H2 - should equal net press run shown in A) 688,000. Percent paid and/or requested circulation, 97.78%
16. This Statement of Ownership will be printed in the December issue of this publication.
17. I certify that the statements made by me above are correct and complete. Colin Crawford, President and CEO. 10/1/98

Bullet Drive Express

DRIVE WON'T WEIGH YOU DOWN

CHANCES ARE YOUR POWERBOOK can't accommodate the floppy, CD-ROM, and removable-media drives that you've got stashed in your computer bag—and that's without considering an additional hard drive. Road Warrior's Bullet Drive Express—an external drive for any PowerBook equipped with a CardBus slot—helps ease the PowerBook-peripheral squeeze.

Setting up the Bullet Drive Express is simple. Its sassy leatherlike pouch includes a cable that holds a Type II PC Card and an IDE connector that plugs into the back of the drive's platinum-



colored enclosure. Although we looked at a recently discontinued 1.4GB hard drive, Road Warrior currently offers 2GB, 3GB, 4GB, 5GB, and 6GB disks with the Bullet Drive Express. You can purchase an empty enclosure and easily install your own hard drive.

The first Bullet Drive Express we received didn't work, due to a faulty PC Card, but the replacement drive worked once we turned off PC Exchange before

formatting the disk—a requirement not noted in the manual. Like drive-bay devices, the Bullet Drive Express can be removed and mounted while the PowerBook is running. To remove the drive, drag the drive's icon to the Trash, and the PC Card ejects. To mount it, just push the card into the CardBus slot.

The Bullet Drive Express comes with an AC adapter, but when the drive's not plugged into an AC outlet, it pulls its power from the PowerBook.

The Bullet Drive Express is no speed demon. In fact, when we ran it through MacBench 5.0's Disk and Publishing Disk tests, we found it to be slower than the internal drive in a PowerBook G3/292. (See "Portable Drive's No Speedster" for test results.) For general use, the Bullet Drive Express hardly seems sluggish, but for heavy digital-video and -audio work, you may find the Bullet Drive Express wanting.

Macworld's Buying Advice

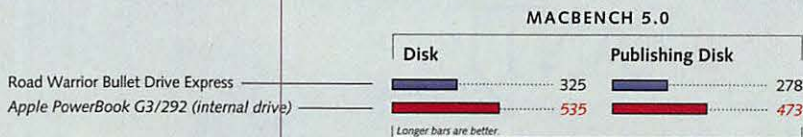
The Bullet Drive Express proves to be a useful companion for PowerBook users who need more than a little extra hard-disk space. Granted, it's slower than a typical internal hard drive, but it's small and easy to use and doesn't require a power adapter or a drive bay. For the most part, this warrior's ready for the road.—CHRISTOPHER BREEN

RATING: ★★½ **PROS:** Small and easy to use; pulls power from PowerBook. **CONS:** Less-than-stellar performance. **COMPANY:** Road Warrior (714/434-8600, www.warrior.com). **LIST PRICE:** Enclosure only, \$130; with 2GB to 6GB drive, \$500 to \$1,080.



Portable Drive's No Speedster

Best results in red. Reference system in italics. MacBench 5.0 scores are relative to those of a Power Macintosh G3/300, which is assigned a score of 1,000 in each test.



Behind Our Tests

The PowerBook G3/292 ran Mac OS 8.1 and was equipped with 96MB of RAM, a 512K system disk cache, and a 4GB IDE internal hard drive. For detailed information on our testing methodology, see www.macworld.com/tests/.—Macworld Lab testing supervised by Kristina DeNike

Real fast-
which is the professional publisher?



Cool
Flexible
Lower cost
Easy to use
Easy to learn
Feature-packed



ColorSync®
Automation
AppleScript®
AppleEvents®
4-color process
Custom work flow



With Creator2™ layout software, they both are!

real!
fast!

CREATOR2



Is the professional publisher in you an (A) creative genius exhibiting the "bleeding edge of cool" through your choice of real-world, feature-rich yet precise print design & layout software, absolutely demanding your work be produced on your "totally hip" iMac™; or (B) a technology freak "pushing the envelope" of design automation and high-quality color production while showing no fear in utilizing ground-breaking software on the fastest G3 available; or (C) somewhere in between? No matter. Creator2 is the layout software you have been waiting for. Creator2. Real. Fast. And from a rock-solid company that's been developing publishing software since 1989.

For more information, call 1-800-245-9278 or check out our Web site at www.creator2.com.
Publishing Systems Division of Multi-Ad Services, Inc.
1720 W. Detweiler Dr., Peoria, IL 61615-1695 • www.multi-ad.com

Macintosh G3, iMac and Mac are registered trademarks of Apple Computer, Inc. All corporate names and trademarks are properties of their respective companies.

Macworld

Live!

COMING SOON!

January 5 - 8, 1999
Macworld Expo
San Francisco
Moscone Center



Wootech Voyager Professional Edition

WEB TOOL TAKES YOU FOR A BUMPY RIDE

CONSTRUCTING WEB SITES almost always requires multiple programs: HTML editors and graphics tools, plus software for creating animation, sound, or video. Wouldn't it be great if you could coordinate these tools and the files they create? That's the promise of Wootech Voyager Professional Edition, which uses

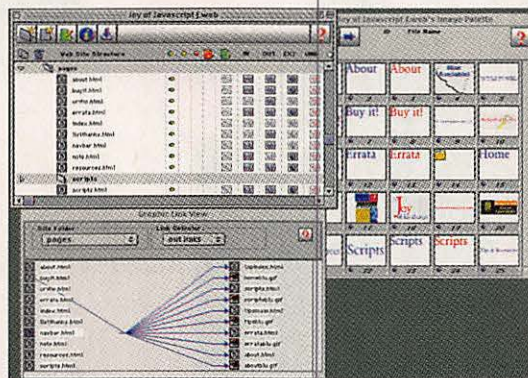
Unfortunately, Voyager's appeal is more theoretical than practical; the program is almost unusable for real work. The biggest problems involve initial site import. When Voyager imports a site, it makes copies of each site element and stores them in TheVault. If you have a large site, TheVault for that site will be correspondingly large. Once the database reaches a certain size, Voyager begins to suffer memory failures, freezing or crashing. Even Wootech tech support—available only via e-mail—couldn't tell me the actual size that would prompt such failures. The program also hangs if you run out of disk space or try to import files with invalid Web names—even if they're valid Macintosh file names.

You could start a site in Voyager and then find at some point that it grows so large that the program fails, leaving you in the lurch. Voyager is also missing a built-in FTP feature that would allow you to directly upload and download Web sites.

Macworld's Buying Advice

The idea behind Wootech Voyager is appealing, but the execution is not. Helping you bring order to the files that make up a Web site—while allowing you to use your favorite tools—is a laudable goal.

But Voyager's bugs and file-import difficulties make it unsuitable for use with large Web sites. And if you have a smaller site, the site-management functions built into GoLive CyberStudio Personal Edition or Adobe PageMill 3.0 will be perfectly adequate. Wootech says that version 3.0, due in early 1999, will fix the program's major problems. I suggest that you skip this version and wait for the next.—TOM NEGRINO



Asset Management Wootech Voyager's Site windows let you check the links on your Web page, and the Image Palette provides easy access to graphics.

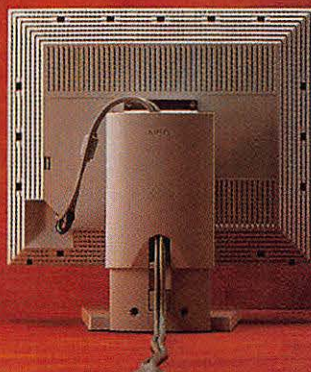
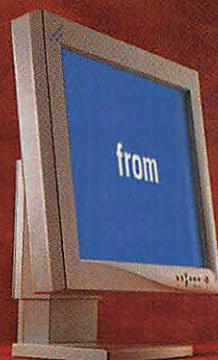
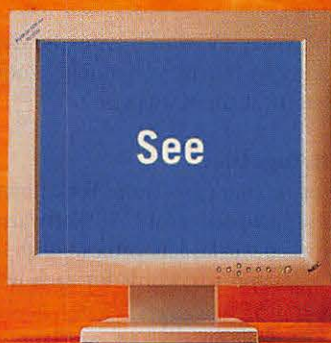
a database to organize the elements of your Web site. Unfortunately, the program's poor performance leaves the promise unfulfilled.

In the Vault

Voyager imports HTML pages, graphics, and media files into a central object database called TheVault. You can then access elements of a particular type from a single palette. The Image Palette shows thumbnails of all the graphics in your site; double-clicking on a thumbnail launches the application that created the graphic. Similarly, the Site Structure window shows thumbnails of each HTML page; double-clicking here brings up the page in your preferred HTML editor. Voyager tracks changes you've made to the HTML code and handles site-management tasks such as checking hyperlink validity.

Voyager works with most Web-page editors except NetObjects Fusion, which uses its own proprietary database to store HTML elements. I used Voyager with GoLive CyberStudio, BBEdit, and Claris Home Page for Web authoring and with Photoshop and Adobe ImageReady for image editing.

RATING: ★★ **PROS:** Good site management; usefully consolidates site assets. **CONS:** Frequent crashes; poor error handling; wasteful of system resources; no built-in FTP tool; no telephone technical support. **COMPANY:** Wootech (650/286-1112, www.wootech.com). **LIST PRICE:** \$99.



THE MULTISYNC LCD SERIES WITH XTRAVIEW™ TECHNOLOGY.

The remarkable new MultiSync monitors feature XtraView technology for a wide 160° viewing angle – 80° up, down, left and right.

The flexibility of portrait or landscape displays. A separate power supply for universal mounting on a wall, stand or arm. Optional MicroTouch™ touch screen capability and OptiShield™ protective glass.*

	Viewable Size	Max Res	Weight	Active Matrix LCD	XtraView Technology	QSM™ On-Screen Controls
MultiSync LCD2010™	20.1"	1280x1024	27.6 lbs/16.9 lbs w/o stand	yes	yes	yes
MultiSync LCD1810™	18.1"	1280x1024	22 lbs/12 lbs w/o stand	yes	yes	yes
MultiSync LCD1510™	15"	1024x768	15.4 lbs/8.9 lbs w/o stand	yes	yes	yes
MultiSync LCD1510V™	15"	1024x768	14.8 lbs/8.3 lbs w/o stand	yes	no	yes

All models are compatible with PC, Mac, workstation or any VESA compliant analog RGB signal, no special card required.
*OptiShield protective glass and MicroTouch touch screen are factory options available on the MultiSync LCD1510, LCD1510V, and LCD2010 only.

Less space, weight and energy consumption. And at 20," the MultiSync® LCD2010 even boasts the largest viewing area of any LCD

monitor. Hey, less is more.



MultiSync LCD2000™



MultiSync LCD1510
MultiSync LCD2000



MultiSync LCD400™



MultiSync LCD1510



MultiSync LCD2000



MultiSync LCD1510

For more information on these new LCD monitors or our current 14" models, call 1-800-NEC-INFO or visit us at www.nec.com or www.xtraview.com.

Choose 16 at www.macworld.com/getinfo

Only Macworld Live
provides live coverage
everyday at
Macworld Expo,
featuring:



➔ **Keynote Analysis with**
Macworld editor-in chief,
Andy Gore

➔ **Interviews with Industry**
leaders: Apple, Mitsubishi,
Dantz and others!

➔ **Q&A with**
your favorite
IDG Books
authors, like
David Pogue,
Bob Levitus
and more!



➔ **The**
Winners of the 1998
Eddys

➔ **Henry's Hot Seat: The**
latest Mac products are
put through their paces

➔ **Macworld "Best of Show"**
Winners



PLUS!
WIN! WIN! WIN! WIN!
In the Macworld Live Ultimate
Sweepstakes!
4 times a day—every day of the
show!



ArchiCAD 6.0

BUILD ROME IN A SINGLE DAY

ARCHITECTS FACE TWO DESIGN challenges: drawing something impressive enough to win a commission and then creating plans to turn the concept into a real building. Graphisoft's ArchiCAD 6.0 does a fine job of helping you meet both challenges. New 3-D features extend the "wow the client" impact of ArchiCAD creations, and expanded groupware functions greatly simplify the collaborative effort common on large projects.

We Do Buildings

One key to ArchiCAD's success is the program's pure specialization in architecture; ArchiCAD is rather awkward for

(see "X-ray Vision") speeds design checking by letting you quickly zoom in on details in the drawings.

Do It Together

The program's new TeamWork function, a unique adaptation of CAD software to a networked world, lets you establish separate users and passwords for each part of a design project.

The program does an excellent job of translating files that are in AutoCAD v14 DWG, which is currently the most used CAD format. No other program is as adept at preserving object specifications when converting to and from the format.

ArchiCAD also makes it easy to collaborate with builders; you can automatically generate component and materials lists from drawings. You can also print your 2-D drawings on any CAD-scale plotter of the last decade.

A Few Cracks

ArchiCAD can be a bit fussy. Instead of a single Open command on the File menu, it has two commands, each with multiple options. You need at least 64MB of RAM for easy use; the manual warns against using virtual memory, and the virtual-memory hit is harsh if you do use it—with window-open, -close, and -switch operations running at 10 to 15 seconds each on a fast G3.

ArchiCAD also uses a keyboard-port hardware lock—even beefed-up laptops and iMacs can't run the program. The lack of laptop support can be a problem for people doing on-the-road presentations.

Macworld's Buying Advice

ArchiCAD 6.0, with its dedicated focus on a single market, has evolved into the Mac program of choice for architects. If you do mechanical design, look elsewhere, but if you design buildings, ArchiCAD can seriously improve productivity throughout your office.—CHARLES SEITER



X-ray Vision ArchiCAD's QuickViews palette gives you a scaled-down overview of large drawings, and it has an adjustable rectangular selector for selecting drawing views for the main window.

industrial or mechanical design. The program's object libraries consist exclusively of architectural components, and the software itself is based on the concept of a Virtual Building.

ArchiCAD is a well-behaved Mac program, with intuitive menus and—new in this version—the ability to drag and drop objects into floor plans. The objects themselves, specified in ArchiCAD's Geometric Description Language, are intelligent; they contain extra information that lets the program decide what to do about intersections and other conditions, without user intervention.

New 3-D features enable you to view 2-D drawings from a 3-D perspective. The program also includes bundled utilities that let you produce photo-realistic virtual-reality walk-throughs of your designs. A new QuickViews feature

RATING: ★★★★★ **PROS:** Intuitive tool set and huge object libraries, all geared to architectural CAD. **CONS:** Hefty RAM requirement; no laptop support. **COMPANY:** Graphisoft (415/703-9777, www.graphisoft.com). **LIST PRICE:** \$3,995.

Imagine

impressing your audience with big screen
multimedia presentations

effortless hi-res editing in Photoshop®

the fun of playing the coolest,
most realistic 3D games

working with fully textured 3D models in real time



You can

with ATI graphics accelerator.

Improve your graphics instantly with ATI.



You'll be blown away when you see how adding a graphics accelerator dramatically upgrades the graphics on your Mac. Just plug in any one of our accelerator boards powered by ATI 3D RAGE PRO graphics, and you'll instantly see more colours, higher resolutions and faster, smoother 2D & 3D graphics than you could imagine. Choose the ATI graphics accelerator that suits you best.



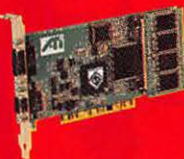
ATI XCLAIM VR is the only **5-in-1** accelerator board that gives you 2D, 3D and video acceleration PLUS video capture and video out for big screen presentations or arcade-style gaming. **Now comes with XCLAIM-TV**, the add-on TV tuner card that turns your Macintosh into a high-end TV!



ATI XCLAIM 3D provides **fast 2D and 3D** performance, hi-res true colour graphics and full screen, full motion video. Perfect for design and content creation professionals who typically use resolutions up to 1152x870.



Developed with the professional designer in mind, **ATI NEXUS GA** is a 2D & 3D graphics accelerator featuring ultra-high res true colour and workstation-class 3D performance. **NEXUS GA's New powerful 16MB of memory** supercharges your graphics performance! Ideal for working in resolutions above 1152x870 **up to 1920x1080**.



To find out how you can upgrade your graphics with ATI's award-winning graphics accelerators check out our website at www.atitech.com/macwo.

© Copyright 1998, ATI Technologies Inc. ATI, NEXUS, XCLAIM, and RAGE PRO are trademarks and/or registered trademarks of ATI Technologies Inc. All other company and/or product names are trademarks and/or registered trademarks of their respective manufacturers. Features, performance, and specifications may vary by operating environment and are subject to change without notice. Products may not be exactly as shown. 1. At participating retailers.

Now You See It.™

www.atitech.com/macwo



Conquer Disk Damage



Introducing DiskWarrior™,
a revolutionary new way
to restore damaged disks!

DiskWarrior is a revolutionary new utility that combats disk damage. It quickly rebuilds, recovers and optimizes your HFS and HFS Plus disk directories, eliminating all directory errors and recovering lost files. Other utilities attempt to repair disks by patching the damage. Patching can result in more damage and permanent loss of files.

100% Recovery Assurance

Only DiskWarrior builds a new optimized directory using data recovered from the damaged directory. You have 100% assurance that DiskWarrior will always restore your disks and recover your files when directory damage is your enemy.* You'll also have 100% confidence that you're getting the desired results. DiskWarrior's exclusive Preview ability lets you preview the restoration. You can examine your damaged disk in the Finder as it will appear after the directory is restored but before any changes are made to your disk.

Routine Maintenance

DiskWarrior is your first line of defense against unseen disk damage. Running DiskWarrior regularly prevents small unseen problems from becoming large ones by keeping your directories error free. You'll also keep your directories optimized to speed up overall disk performance.

©1998 Alsoft, Inc. PO Box 927, Spring, Texas 77383-0927 USA. 281-353-4090 or fax 281-353-9868. DiskWarrior is a trademark of Alsoft, Inc. *Visit our web site or call for requirements. DiskWarrior is not a magician. No utility can restore directories that have been written over.



THE UTILITY COMPANY

ALSOFT

www.alfsoft.com 800-257-6381

Choose 140 at www.macworld.com/getinfo

Reviews

SECOND LOOK

Mailsmith 1.1

IMPROVED E-MAIL PROGRAM

MACWORLD'S REVIEW OF MAILSMITH 1.01 (October 1998) praised the program for its fine text-handling, searching, and mail-filtering abilities but lamented its sluggish performance and utilitarian interface. Bare Bones Software has successfully conquered the performance issues in version 1.1, which is a free upgrade for registered users. The new version is considerably faster in everyday use and stores information more efficiently, requiring less disk space.

Since the database does a better job of managing disk space, my mail database shrank by about 40 percent. A new menu command allows current Mailsmith owners to reclaim wasted space and shrink the size of their mail databases.

Although most of this release focuses on performance enhancements, Bare Bones has also added a few new features. Mailsmith 1.1 sports contextual menus for controlling mail management and address books, and it auto-completes addresses from your address book as you type them in a new message. Previously, Mailsmith used the 8 Finder labels to color and categorize messages; now there are 24 additional customizable labels. And a nice filtering enhancement called Make a Filter lets you easily build filters using the attributes of the currently selected message. The program also now works with Aladdin Systems' Stuffit Deluxe and Stuffit Expander.

Macworld's Buying Advice

Mailsmith's improved performance makes the program less cumbersome to use, but now Bare Bones needs to perk up the interface and include more features found in other programs such as Microsoft's Outlook Express and Qualcomm's Eudora Pro. If you're interested in a new e-mail program with excellent text-handling capabilities, though, Mailsmith 1.1 is worth a look.—TOM NEGRINO

RATING: ★★★ **PROS:** Improved performance; enhanced convenience features. **CONS:** Interface is still clunky and unappealing. **COMPANY:** Bare Bones Software (781/687-0700, www.barebones.com). **LIST PRICE:** \$79.

If You Don't Choose A Diamond Scan Monitor, It's Going To Cost You.

Introducing Diamond Scan® Displays Starting Under \$250.

Mitsubishi's new line of Diamond Scan displays offer the perfect combination of quality, performance and reliability. And with low pricing across the entire Diamond Scan line, Mitsubishi is an even greater value. So now you won't ever have to sacrifice performance for a lower price. Mitsubishi also backs each Diamond Scan display with a full 3-year warranty and service and support programs that are already the best in the business. It all adds up to a lasting, quality



investment. Get all the Diamond Scan details – including our multimedia displays – by contacting Mitsubishi Electronics today.

USA: 800-843-2515 • Canada: 800-387-9630 • QWIKFAX: 800-937-2094
World Wide Web: www.mitsubishi-display.com/pb/mwd/ds

Diamond Scan® Monitor Line

Diamond Scan 50

- 15" CRT/13.8" DVI*
- 1280 x 1024/60 Hz NI
- 0.28 mm dot pitch

Diamond Scan 50M

- 15" CRT/13.8" DVI*
- 1280 x 1024/60 Hz NI
- 0.28 mm dot pitch
- Headphone jack and two three-watt side-firing speakers

Diamond Scan 70

- 17" CRT/16.0" DVI*
- 1280 x 1024/65 Hz NI
- 0.28 mm dot pitch

Diamond Scan 70M

- 17" CRT/16.0" DVI*
- 1280 x 1024/65 Hz NI
- 0.28 mm dot pitch
- Headphone jack and two three-watt front-firing speakers

Diamond Scan 90e

- 19" CRT/18.0" DVI*
- 1600 x 1200/75 Hz NI
- 0.25 mm dot pitch
- Optional powered USB hub

MITSUBISHI
Diamond Scan 90e

MITSUBISHI
Diamond Scan 50M

MITSUBISHI
DISPLAY PRODUCTS
Innovation On Displaysm



©1998 Mitsubishi Electronics America, Inc. Diamond Scan is a registered trademark of Mitsubishi Electronics America, Inc. Microsoft, Windows and the Windows logo are registered trademarks of Microsoft Corporation. Mac and the Mac OS logo are trademarks of Apple Computer, Inc. Monitor prices and specifications subject to change without notice. *DVI Diagonal Viewable Image.

Choose 87 at www.macworld.com/getinfo

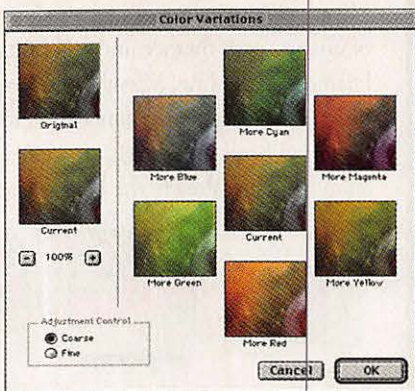
Digital Darkroom 1.5

IMAGE EDITOR NEEDS DEVELOPMENT

AIMED AT NOVICES WITH BASIC image-editing needs, MicroFrontier's Digital Darkroom 1.5 offers a simple interface, a basic tool set, and a few automatic-correction features. If your scanner or digital camera came bundled with an image editor such as Adobe PhotoDeluxe (see *Reviews*, April 1998) or Kai's Photo Soap (see *Reviews*, October 1997), you already own a far superior image-editing application.

Digital Darkroom's simple tools are contained in a single floating palette. Along with the usual complement of tools, the palette includes a gradient tool and a basic text tool but no graphics primitives such as circles or squares. You make selections by using marquee, magic-wand, and lasso tools that prove adequate for simple touch-ups and basic compositing; Digital Darkroom lacks the ability to feather selections to create smoother editing transitions.

An Option button lets you change the brush tool's size and shape and the line tool's width. Unfortunately, the eraser is limited to an unchangeable square, so erasing is difficult in tight areas. Additionally,



Variations on a Theme Digital Darkroom's Color Variations filter provides a simple interface for adjusting the color of an image or a selection.

Digital Darkroom's lack of smudge and blur tools makes it nearly impossible to do smooth, seamless touch-ups.

Digital Darkroom supports Photoshop plug-ins, including Acquire modules, which allow you to import graphics directly from scanners and digital cameras. For color correction, Digital Darkroom provides a Brightness and Contrast filter as well as a Color Variations tool. Free of complicated levels or curves dialog boxes, Digital Darkroom's color correction is easy to use. For each filter, the current selection is shown, sur-

rounded by swatches of variations (see "Variations on a Theme"). Clicking on a variation updates the center swatch and provides a new group of choices.

The program's AutoMagic menu provides automatic correction and editing features. The menu's Auto Enhance feature does a good job of equalizing the tonal range of an image; the Red Eye and Scratch Removal filters also prove useful.

Although the program includes a virtual-memory scheme that makes it possible to edit large images, Digital Darkroom's performance can be a bit sluggish, even on a speedy modern Mac.

Macworld's Buying Advice Digital Darkroom's features can be found in any number of image-editing programs, many of which are provided free with scanners and digital cameras. If you lack one of these bundled applications, you'll find more correction features and a simpler, step-by-step interface in Adobe PhotoDeluxe for just \$10 more than Digital Darkroom's list price.—BEN LONG

RATING: **PROS:** Inexpensive, functional basic tool set. **CONS:** Lacks the automation and more powerful tools of its competitors. **COMPANY:** MicroFrontier (515/225-9800, www.microfrontier.com). **LIST PRICE:** \$39.95.



Congratulations. You've got a position
to fill.

Now What?

Search

Call HireKnowledge

BABY BLUES

The at-home pregnancy test was blue. "Gadzooks!" Your mind whirs and shimmies, spitting out a panicked stream-of-consciousness.... What color should you paint the baby's room and, ooooooh, wonder if it's a boy or girl, need some diapers, a crib, baby clothes, pick a name, like Moon Unit or Groucho, you've always liked those names, you think.... But, heavens to Betsy, who's going to do your job while you're on leave and will they screw up all you've worked for?....

Not if you call HireKnowledge.

RELAX. BREATH. PUSH.

Let HireKnowledge worry about filling your position while you're on leave and then you can wrestle with the more important dilemmas like cloth vs. disposable, home vs. hospital delivery, bottle vs. breast, stay-at-home vs. childcare....

HireKnowledgeSM
Putting Intelligence to Work

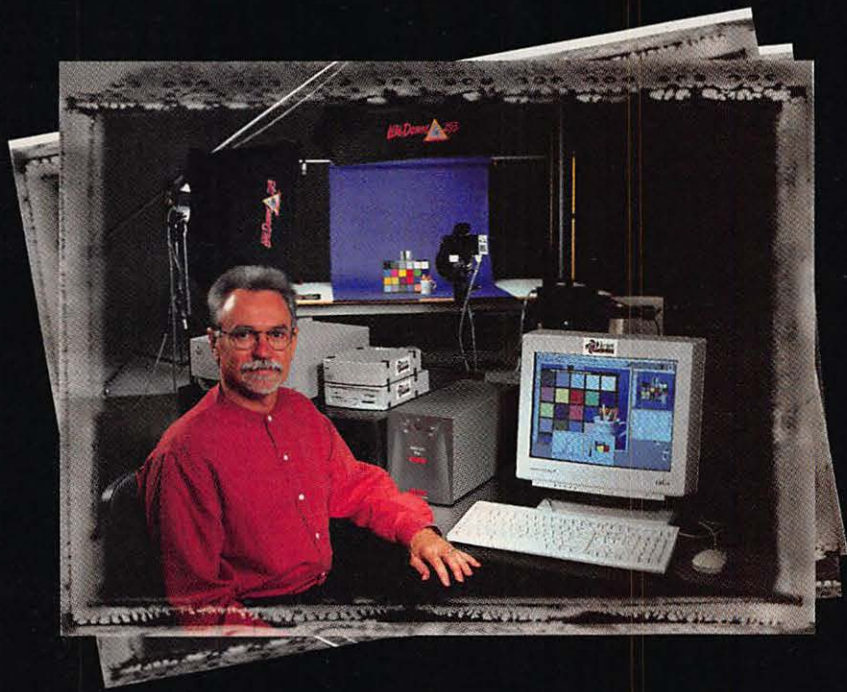
1.800.937.3622

www.hireknowledge.com

Baltimore • Boston • Chicago • Dallas • Kansas City • Philadelphia • Providence • San Francisco • St. Louis • New York • Washington DC

Choose 207 at www.macworld.com/getinfo

What does a digital photographer do
in the middle of a lightning storm?



With APC battery backup power,
he gets the picture.
All the time.

You can find APC power protection products at:

MIDWEST MICRO
1-800-943-5576

COMPU\$A
THE COMPUTER SUPERSTORE



MacWAREHOUSE
1-800-255-6227

MICRO CENTER

APC has won more awards for reliability
than all other UPS vendors combined.



© 1998 APC. All Trademarks are the property of their owners. BP3ABCF-US • (800) 347-FAXX PowerFax • E-mail: apcinfo@apcc.com • 132 Fairgrounds Road, West Kingston, RI 02892 USA

Choose 72 at www.macworld.com/getinfo



Real Life

Dear APC: Bartlett Digital photography studio bills by the hour, which means we cannot tolerate avoidable downtime. The surge suppression and battery power of an APC UPS lets us finish the job, as scheduled, even with a temporary power outage.

- Tom Bartlett, central Florida

Fact

According to research by IBM, a typical computer is subject to more than 120 power problems a month. Surge protectors prevent only a fraction of the power problems that cause keyboard lock-ups, system crashes, corrupted data, and worst of all, motherboard burnout. An APC uninterruptible power supply (UPS) with surge suppression and battery back-up protects your software, hardware, and most importantly, your work. APC Back-UPS Pro® provides clean, reliable power that lets you function at peak performance, giving you time to shut down during a power outage. Getting the picture? Visit the listed retailers to add APC's Legendary Reliability to your system.

FREE! Guide to Power Protection

Order your FREE 60-page Solutions Guide from the APC Web site today at:

<http://promo.apcc.com> KEY CODE H984Z

American Power Conversion
(888) 289-APCC x8424 • FAX: (401) 788-2787

APC
Legendary Reliability

FTPForms 2.3

STREAMLINED INTERNET FILE EXCHANGE

GRAPHIC-ART SERVICE BUREAUS yearn for a way to let customers submit materials via the Internet. Alas, the Net's primary file-transfer tool, FTP, is woefully inadequate for the job. Pine Island Software's FTPForms 2.3 streamlines FTP-based customer input, letting you distribute a preprogrammed FTP client application to which customers simply drag and drop the work they want to send. It also collects order information, automatically downloads incoming files, and sends e-mail notifications to customers. And it does it all with a level of security not possible with generic FTP file exchange.

After you configure FTPForms with a single log-in ID and password, your customers download the client from your Web site. When the customer drops a file for transmission, a customized order-submission form pops up on-screen. FTPForms automatically logs in to your FTP server and uploads the selected files, using encryption to maintain security; customers never know the name, user ID, or password of your FTP server.

Back at your office, you run the FTP-



Your Order, Please FTPForms automatically accepts customer orders, transfers the files to your FTP server, and delivers e-mail notification of receipt.

Manager, which logs in to your FTP server at predefined intervals to check for incoming files. When new files arrive, FTP-Manager automatically downloads them and optionally prints the customers' order forms on your local printer. It also notifies customers via e-mail that you've received their work.

The client comes in both Mac and Windows versions. FTPForms works with any standard FTP server—including the Unix systems common among Internet service providers—so you need not run a dedicated

server on your premises. The package includes sample HTML forms that you can customize, using any standard HTML editor.

FTPForms has one security weakness: although it encrypts FTP log-in values stored with the client application, these values travel unencrypted to the Internet. An interloper—including one of your customers—could use a TCP/IP network analyzer such as EtherPeek (see *Reviews*, May 1998) to intercept data and gain access to proprietary files. A better approach would be for FTPForms to encrypt the files and order forms themselves during upload and decrypt them on download.

Macworld's Buying Advice FTPForms automates one of the most time-consuming aspects of the service-bureau business while improving customer service in the bargain. Cross-platform support and attention to privacy add to its value.—MEL BECKMAN

RATING: ★★★★★ **PROS:** Customizable drag-and-drop client; site log-in encryption; cross-platform support; automatic download and e-mail notification. **CONS:** No data encryption. **COMPANY:** Pine Island Software (317/841-0638, www.thebeehive.com). **LIST PRICE:** 1 to 10 users, \$29.95 each; 50 users, \$595; 100 users, \$995; site license, \$1,595.

Surfers: BEWARE of SHARKS!



MacWEEK.com

Professional web surfers know where to catch the best Mac news, commentary, up-to-the-minute stock quotes and (of course)

Mac the Knife.

News travels fast, ~~Sharks~~ moves faster.

MacWEEK.com

MacWEEK: Award-winning Mac news coverage since 1987
http://www.macweek.com

THE SCANNER THAT ATE THE TRANSPARENCY ADAPTER!

Scan reflective prints on the scanner's upper bed...

...or transparencies and negatives from the internal film tray

Introducing the **ScanMaker® 4**, the all-in-one scanner from Microtek, the most trusted name in desktop scanning. The same innovators who brought you the ScanMaker® III (winner of *Publish Impact Award*, *PC Magazine Editors' Choice* and *Best of 1997* awards) now bring you this incredibly fast, dual-media color scanner.

The ScanMaker 4 features Microtek's own patented **Emulsion Direct Imaging Technology™ (E.D.I.T.™)**. Unlike a conventional flatbed scanner which scans film with an attachable transparent media adapter (usually an accessory item purchased separately), the ScanMaker 4 captures images directly from the surface of film transparencies or negatives — *internally*. No more light refraction problems. No more annoying Newton rings. Just amazingly sharp images loaded with detail. Photographic prints, illustrations, or documents up to 8.5" x 14" can be scanned on the scanner's upper bed.

The scanner's 36-bit color depth (input and output), 600 x 1200 dpi optical resolution (up to 9600 dpi enhanced) and superior optics deliver performance suitable for any company's graphic needs. All this and some great software for a suggested retail price of only \$699. It's almost like getting two scanners for the price of one.



ScanMaker 4

FEATURES

- Microtek's patented Emulsion Direct Imaging Technology™
U.S. Patent No. 5,574,274
- Full 36-bit color depth — input and output
- 3 long-life cold cathode lamps
- 600 x 1200 dpi optical resolution / 9600 dpi enhanced
- Microtek's ScanWizard™ scanner controller
- Adobe Photoshop LE image-editing software
- MetaCreations™ Painter™ 5
- Caere OmniPage Limited OCR software for scanning text



Painter 5

MICROTEK

www.microtekusa.com
1-800-654-4160

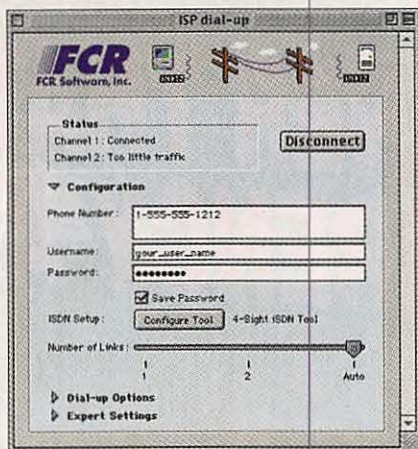
LinkUPPP Duo 1.1

FLEXIBLE PPP DIALER FOR ISDN

THE PROMISE OF ISDN IS BANDWIDTH, but the software that comes with many ISDN cards doesn't support 128-Kbps capability or supports it inflexibly. FCR Software's LinkUPPP Duo 1.1, a PPP dialer that works with most popular ISDN cards, provides full user control over bandwidth allocation. You can set it to use only a single B-channel or both channels or have it automatically kick in the second channel as needed.

With automatic bandwidth assignment enabled, LinkUPPP Duo typically uses only one channel—a money-saving maneuver. If you request a large file, LinkUPPP Duo will detect the change in activity and automatically connect the second channel to speed the download. After the download, when you're back to low-bandwidth browsing, LinkUPPP Duo disconnects the second channel.

You can also configure LinkUPPP Duo to dial automatically when you initiate a Net activity, such as checking e-mail or requesting a Web page. It can redial automatically when a connection drops or terminate a connection that's been idle. Expert settings let you access a host of acronym-laden advanced



On Again, Off Again LinkUPPP Duo 1.1 automatically connects an ISDN line's second channel when you perform a high-bandwidth operation and disconnects the channel when traffic is lower.

features that only a network manager could love. And, yes, it provides full support for AppleTalk—as well as TCP/IP—over PPP. LinkUPPP Duo works with any internal ISDN card that has an accompanying Communications Toolbox tool and that's capable of block-synchronous communication.

LinkUPPP Duo is a bit pricey: \$99.95 via FTP, \$10 more if you opt for disks. Its only other shortcoming is the lack of a hard-

copy manual, an oversight that's bound to produce anxiety in some users, particularly during setup. Most of the HTML-based documentation is clear and easy to follow, but there are some rough spots.

The company's related product, LinkUPPP Quattro 1.1, supports the combination of up to four ISDN B-channels for a maximum potential bandwidth of 256 Kbps. Released as we went to press, the company's LinkUPPP Turbo 3.0 lets you combine the bandwidth of two standard modems (up to 56K each) in a multilink PPP connection, providing up to 112 Kbps.

Macworld's Buying Advice By flexibly supporting multilink PPP connections, LinkUPPP Duo 1.1 lets you take maximum advantage of ISDN's custom bandwidth allocation. For the most part, it's easy to set up and use. And it works. If you're frustrated by the limitations of your ISDN card's bundled software, give LinkUPPP Duo a try.—HENRY BORTMAN

RATING: ★★★★★ **PROS:** Dynamic allocation of ISDN B-channels; robust; broad set of user-configurable options. **CONS:** No printed documentation; a bit overpriced. **COMPANY:** FCR Software (617/494-1300, www.fcr.com). **LIST PRICE:** Via FTP, \$99.95; on disk, \$109.95.

The driving force behind DIRT Motorsports is burn-rubber, haul-ass, eat-dust speed. And we're just talking about their web page.

The editor was last updated 31 Jul 1998 and made changes to the site.

@ Speed. Another Reason People Trust **interland** Web Hosting

700+ horsepower racing machines are fast. And thanks to Interland, now DIRT Motorsports' website is too. But that's just one of the many reasons DIRT Motorsports chose Interland. 99.9% guaranteed uptime or the month is free. Superior, toll-free technical support 24x7. And pricing with absolutely no hidden charges. It's a track record that's putting Interland ahead.

Check out our website and discover why more and more people worldwide are trusting their websites to Interland. Whether you're a computer novice or guru, Interland offers the best service, support and technology the industry has to offer. At a price that's right for you. Quit spinning your wheels. Call Interland today.

www.interland.net

Web Hosting From
\$19.95 Per Month
1-800-599-0547
404-586-9999

© Copyright 1998 Interland, Inc. DIRT Motorsports website reproduced by permission. Logo, site design and name are registered trademarks of DIRT Motorsports, Inc.

Choose 10 at www.macworld.com/getinfo

IS YOUR 28.8 MODEM
COMING BETWEEN YOU
AND YOUR ENJOYMENT
OF THE INTERNET?

The World's Best-Selling
56K Modem.



If your modem's not in a hurry, it's just in the way. That's why it's time to move to V.90 U.S. Robotics® 56K* desktop modems from 3Com. They deliver significantly greater overall performance† than other V.90 56K modems for high speed downloads and real-time online games.

3Com U.S. Robotics®

So get over to your nearest 3Com retailer or find us at www.3com.com/56k for additional information. Because, when it comes to getting the most out of the Internet, the modem makes the difference.

35

*Capable of receiving at up to 56 Kbps and sending at up to 31.2 Kbps. Due to FCC regulations on power output, receiving speeds are limited to 53 Kbps. Actual speeds may vary. Requires compatible phone line and server equipment. Complies with both the determined V.90 ITU 56K standard and x2 technology protocols. Standards officially determined in February, 1998; ratification expected in September, 1998. See www.3com.com/56k. †Henderson Communications Laboratories performance tests of leading internal data fax modems, June 1998. ©1998 3Com Corporation. All rights reserved. 3Com, the 3Com logo and U.S. Robotics are registered trademarks and More connected. is a trademark of 3Com Corporation.

3Com®

More connected.™

WebSentinel 2.0

MASTER OF THE REALMS

FOR MACINTOSH WEBMASTERS who find their server's built-in security limited and tedious, Purity Software's WebSentinel 2.0 promises relief. This WebStar API (W*API) plug-in provides support for multiple database mechanisms and an attractive interface for an array of security services, including new features such as support for workstation restrictions, HTML log-in forms, and account expiration.

WebSentinel 2.0 extends the realms model of Web security common on Macintosh Web servers. Rather than applying permissions to a folder (such as the Logs folder), you set permissions for a group of URLs (the realm) that share some specific text (any URL that contains .log, for example). This method can be very powerful, allowing administrators to secure like files regardless of their location on the server.

In addition to standard HTTP authentication for realms, WebSentinel 2.0 supports HTML-forms-based authentication, allowing you to present personalized log-in screens. Webmasters can designate customized forms and no-access files for each realm. WebSentinel 2.0 even offers Redi-



Lockdown WebSentinel 2.0 Admin has a Finder-like interface for defining users, groups, and realms.

rection realms, so requests for certain URLs can be automatically sent to another page.

Once realms are defined, you grant access to users, groups, and workstations. In addition to simple user names and passwords, administrators can define expiration criteria for each user, consisting of a date, a number of days, or even a number of accesses.

WebSentinel 2.0 supports multiple "data targets" (back-end databases); you can save your information to more than one type of outside database, including those in Purity's own Verona format and those in FileMaker Pro.

It took me about 60 seconds to install WebSentinel 2.0 on a Mac server running StarNine's WebStar 3.01. After another five minutes, I had my users, groups, and realms

up and running. Both the administrative application and Web-browser interface are attractive and usable, but a few very minor interface glitches exist. Although assigning access to users and groups is quite simple, WebSentinel 2.0 needs to offer an easier way to display all users and groups assigned to a given realm within a single window.

The security options all worked nicely, and there was no noticeable performance hit with ten users and realms. I did encounter problems when trying to use the plug-in with WebTen, due to an inconsistency with Tenon's W*API implementation. Tenon has a patch that addresses these problems.

Macworld's Buying Advice Macintosh Webmasters will definitely find that WebSentinel 2.0 offers an elegant extension of WebStar's realms-based security. But those dissatisfied with the whole realms concept should look to other options, such as Tenon's WebTen, which offers built-in file and folder security.—JEFF DAVIS

RATING: **PROS:** Elegant interface; authentication forms; multiple data targets. **CONS:** Lack of file and folder security; no easy way to view access by realm. **COMPANY:** Purity Software (512/328-2288, www.purity.com). **LIST PRICE:** \$199 (upgrade from 1.0, \$79).

furniture for the way you do business.
as individual as you are.



1.800.688.2446 x622

www.agiodesigns.com/mw

free catalog

AGIO DESIGNS™

Choose 265 at www.macworld.com/getinfo

Introducing a New
Service to Readers...

Macworld / **Get**
info

www.macworld.com/getinfo

Macworld's **NEW**
Online Reader Service

PC Games to the MAX!

INCUBATION
TIME IS RUNNING OUT



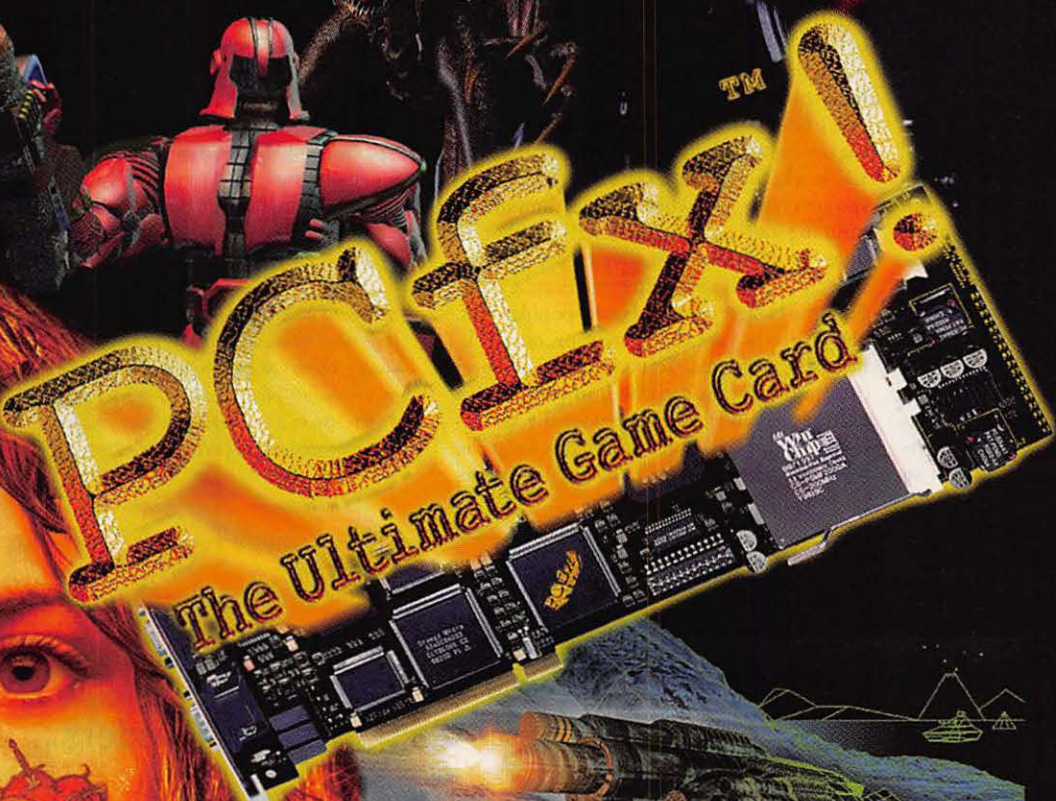
Play the hottest
best selling PC games!

Battle Zone
Bladerunner
Curse of Monkey Island
Deer Hunter
Descent Freespace
F-15
Fallout 2
Final Fantasy VII
Flight Simulator '98
Forsaken
Grand Theft Auto
Hexen II
Incubation
Interstate '76
Jedi Knight
Outlaws
Outwars
Police Quest S.W.A.T. 2
Prophecy
Quake II
Rocky Mountain Trophy Hunter
Tomb Raider II

And More Windows®
Games!

Activision's Civilization
Age of Empires
Age of Sail
Alpha Centauri
Anacronox
Apache Havoc
Asheron's Call
Asteroids 3D
Baldur's Gate
Betrayal at Anatra
Birth of the Federation
Blackstone Chronicles
Blood II
Cabela's Big Game Hunter
Ceasar III
Chaos Gate
Close Combat 2
Combat Flight Simulator
Cyberstrike II
Dark Reign
Death Rally
Descent III
Diablo II
Diakotana
Dominant Species
Draken
Duke Nukem
Dungeon Keeper II
East Front
Enemy Stations
Everquest
F-16 Aggressor
F-22 Total Air War
FIFA Soccer 97
Fighter Squadron
Fighting Steel
Flight Unlimited II

And Many
More...



FORSAKEN

The Ultimate Game Card for The Macintosh!

The new PCfx!™ PC game card from Orange Micro was specially designed to run the high-end 3D PC games on the Mac!

Includes:
32MB, nVidia RIVA 128™ 3D graphics
accelerator, 200 MHz Pentium Compatible
Processor, Direct Sound Compatible, PC Game
Sampler CD ROM & Windows® 98!

© Orange Micro, Inc. 1998. PCfx!™ is a trademark of Orange Micro, Inc. FORSAKEN™ & © 1997 Acclaim Entertainment, Inc. All rights reserved.
Incubation: Time is Running Out is a trademark of Blue Byte Software, Inc. Battle Zone™ is a trademark of Activision, Inc.
S.W.A.T. 2 is a registered trademark of Sierra Online, Inc.



Orange Micro
inc.

"18 Years Of Innovation and Excellence"

(714) 779-2772

www.orangemicro.com

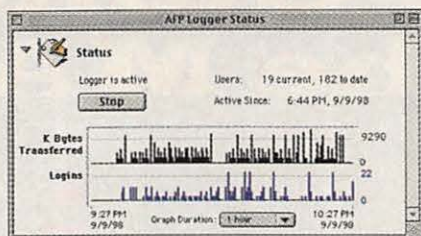
Choose 60 at www.macworld.com/getinfo

AFP Logger

KEEPS AN EYE ON APPLESARE SERVERS

APPLESARE IP IS A BOON TO Mac network administrators, letting them use TCP/IP to extend Apple File Protocol (AFP) file sharing to users on remote networks and even the Internet. But enhanced access inevitably increases server workload, and wider availability brings up questions of security: just who is using the data on this server, anyway? Open Door Networks' AFP Logger 1.0 saves the day, by making a record of user log-ins and log-outs, file accesses, server state changes, and file-system errors. AFP Logger's real-time status display shows server workload at a glance for any time interval of up to a week, and a textual log file gives you a permanent record of every user's activities.

Running in the background on AppleShare IP 5.0 or later file servers, AFP Logger operates as an application—no extensions or control panels required—and displays a real-time activity window showing a histogram of user log-ins and the amount of data transferred. You can change the scale of the graph incrementally, making it easy to locate periods of high activity. Alas, you can't scroll the histogram, so



Captain's Log AFP Logger's real-time display shows AppleShare server activity at a glance.

there is no way to zoom in on a period.

AFP Logger's real value, however, is the log file. Each time an AppleShare event occurs, the program records it, noting the name and IP or AppleTalk address of the user, the type of event, and its success or failure. For example, AFP Logger records every log-in event, whether successful or not. It also tracks file opens, closes, and deletes; file-system errors; password changes; and on the user log-out record, the total number of bytes moved during a given user session. Once you analyze this information, it identifies the busiest users and most-popular files, and it alerts you to security or network-integrity problems. You can select the level of detail you want recorded, so you can, for example, exclude routine Finder file accesses. An included AppleScript helps keep the log's file size manageable and simplifies

locating historical information for analysis.

Unfortunately, AFP Logger doesn't include a log-analysis tool. The log file is written in StarNine Technologies' WebStar-extended log-file format, so most any WebStar log-file analyzer—including Open Door's LogDoor (see *Reviews*, July 1998)—can process it, cataloging usage by file and user. AFP Logger's only other conspicuous defect is that it doesn't record printer-sharing events—critical information in service bureaus, where it's used to track the use of expensive consumables.

Macworld's Buying Advice For those who run AppleShare IP and have high-volume traffic or permit remote access, AFP Logger helps keep an eye on server activities. Its few user-interface glitches don't detract from AFP Logger's primary purpose—recording AppleShare events—but the lack of a log-analysis tool means that you have to buy at least one more utility to get the real benefit.—MEL BECKMAN

RATING: ★★★ **PROS:** Real-time summary display; WebStar-standard log-file format; logs error events. **CONS:** No log-analysis tool; doesn't log printer-sharing events; can't scroll graph. **COMPANY:** Open Door Networks (541/488-4127, www.opendoor.com). **LIST PRICE:** \$299.

VST
TECHNOLOGIES
Incorporated

VST PowerBook® G3 Series
Accessories



Omega, the Omega logo & Zip are trademarks of Omega Corporation. All other trademarks are property of their respective holders. Omega patents protected by patent applications pending in the US and other countries. PowerBook is a registered trademark of Apple Computer, Inc. SuperDisk is a trademark of Imation Corp.

Choose 77 at www.macworld.com/getinfo

Introducing a New
Service to Readers...

Macworld | **Get**
info

www.macworld.com/getinfo

Macworld's NEW
Online Reader Service

Enter to win
two tickets
to the '99
Super Bowl.

DYNAMO USERS ARE NEVER PENALIZED FOR UNNECESSARY ROUGHNESS.



D Y N A M O 640SE

Buy the new DynaMO 640
internal or external drive before
12/31/98 and get a free carrying case
and a chance to win 2 tickets to the
'99 Super Bowl.
Call, or visit our website for details.



If there's one removable storage solution that can take what you dish out, it's DynaMO® 640SE from Fujitsu. Its media cartridges are resistant to moisture, magnets, x-rays and shock. Which means your work is well protected from all types of on-the-job fumbles (except maybe repeated collisions with 300-pound linemen). Your wallet is well protected, too. A 640MB cartridge costs \$19.95*, and it can be rewritten more than 10 million times. DynaMO 640SE is also covered by our No Excuses® limited warranty, so in the unlikely event of a defect, you'll get a replacement drive in two business days. So start saving your work on DynaMO 640SE. It's a very smart game plan. For more details, call, or visit our website.

FUJITSU

(800) 831-8094 ext. 302 www.fcpa.com/winwithMO

©1998 Fujitsu Computer Products of America, Inc. All rights reserved. Certain restrictions apply to the No Excuses limited warranty. Valid in the U.S. and for U.S. residents only. Call (800) 626-4686 for full details. Fujitsu Computer Products of America reserves the right to modify at any time without prior notice any of its procedures for obtaining warranty or post-warranty service, including the addition and deletion of specific products covered under this program. DynaMO, No Excuses and the No Excuses logo are trademarks or registered trademarks of Fujitsu Computer Products of America, Inc. Fujitsu and the Fujitsu logo are registered trademarks of Fujitsu Ltd. All other trademarks mentioned herein are the property of their respective owners. *MSRP. No purchase necessary to enter sweepstakes. For Official Rules and details, go to our website at www.fcpa.com or call (800) 831-8094 for a fax copy of Official Rules. Sweepstakes only open to legal U.S. residents 18 years and older. Offer void where prohibited.

1999 Grolier Multimedia Encyclopedia—Deluxe Edition

RICH MULTIMEDIA AND UPDATED INTERNET LINKS ENHANCE POPULAR CD-ROM REFERENCE TITLE

WHEN YOU LIVE IN AN ERA OF rapidly changing information, you need reference materials that keep you up-to-date. That's the promise of the 1999 Grolier Multimedia Encyclopedia—Deluxe Edition, a two-CD package targeted at junior high and high school students. In addition to 36,000 articles, the software features Web links to new and updated articles, along with two online encyclopedias, The New Book of Knowledge, for elementary school students, and Encyclopedia Americana, for high school, college, and adult users.

The encyclopedia uses a browserlike interface, with a search index on the left and tabs along the top that let you quickly move among different kinds of information. For example, choose an article on civil rights, and you can view a video of the 1963 March on Washington, hear a part of Martin Luther King Jr.'s "I Have a Dream" speech, as well as bring up lists of related articles, photos, and video or sound clips.

Browsing and searching capabilities are strong. By default, all articles are listed alphabetically, but you can find topics



Browsing History The encyclopedia's browserlike interface makes it easy to locate related topics.

through several techniques. You can simply enter the first few letters of the article name in the browse field, use category filters to narrow the list of topics, or search for stories using keywords.

The encyclopedia includes QuickTime movies, sound clips, interactive guides to academic subjects, and, new in this version, virtual-reality panoramas. Video clips and other storage-intensive media elements are housed on the second CD, which helps to minimize disk swapping as you're browsing

text and still images on the first CD.

A built-in atlas lets you quickly zoom in on major cities and see their best-known attractions. In a few mouse-clicks you can move from a map of the United States to a photo of Philadelphia's Liberty Bell.

The package also includes the 250,000-word American Heritage College Dictionary, third edition, but it's not integrated with the other content. Instead, you click on the Dictionary button to look up a word.

Macworld's Buying Advice The Grolier Multimedia Encyclopedia lacks the depth of information found in the Encyclopædia Britannica CD (see "10 Delightful Discs," in this issue) but does offer a wealth of multimedia learning aids and updated Web links. It's a great reference title for junior high and high school students.—STEPHEN BEALE

RATING: ★★★ **PROS:** Strong multimedia features; Web access to additional articles. **CONS:** Dictionary not integrated with other material. **COMPANY:** Grolier Interactive (203/797-3530, www.grolier.com). **LIST PRICE:** \$59.99.

Apple chose EarthLink for the iMac, why not choose EarthLink for your Mac

See
Enclosed
Software
or Call



EarthLink

The "i" in iMac™ stands for Internet. So it's no wonder the iMac comes pre-installed with a direct connection to EarthLink, America's #1-rated Internet access provider.

Other high praise for EarthLink from the Macintosh community...

"The largest independent Internet service provider is also one that caters well to its loyal Macintosh subscribers." — Mac Central, April 17, 1998

"EarthLink has become the Macintosh of the ISP world — the way for 'mere mortals' to connect to the Net." Business Week, December 15, 1997

Special limited time
offer for Macworld readers:

1-800-EARTHLINK

Mention Deal #801964



EarthLink



**FREE
SETUP**
\$25 SAVINGS

**FREE
ACCESS**
15 DAYS

©1998 EarthLink Network, Inc. and Sprint Communications Company LP. Trademarks are property of their respective owners. Sprint and the Sprint logo are trademarks of Sprint Communications Company LP. EarthLink and the EarthLink logo are trademarks of EarthLink Network, Inc. iMac is a trademark of Apple Computer, Inc. All rights reserved.

Paint different.TM



COREL PHOTO-PAINT 8 for Power Macintosh

"It is inevitable that any image editor will be compared to Photoshop. And for once, that program faces some stiff competition."

Ralph Berger
eMediaweekly, August 1998
"Photo-Paint 8: Artful debut"

Introducing Corel PHOTO-PAINT™ 8 for Power Macintosh®. Packed with features for creating animations, natural media artwork, Web images and more, this cutting-edge software makes a seamless addition to your image-editing toolbox. Open and edit Adobe® Photoshop®, MetaCreations™ Painter® and most other image files with ease. Quickly paint fades on layers without special masks. Create dazzling effects with orbiting and symmetrical brush strokes and brushes that interact with textures to simulate natural media. Plus, you can automatically stitch and cross fade images into a QuickTime® VR scene, or photo-edit an existing movie or animated GIF with a full range of tools. Corel PHOTO-PAINT 8 for Power Macintosh—Paint different!



Also available for Windows®.

MacWAREHOUSE
1-800-255-6227

COMPUSA
THE COMPUTER SUPERSTORE™
1-800-COMPUSA
1-800-266-7872



Enter the 9th Corel® World Design Contest

Winning artists receive fabulous prize packages and enjoy worldwide recognition. For details on the contest and to find out how you can enter, visit Corel's Web site at www.corel.com/contests. The Awards Gala—coming to the WordPerfect® Theatre in Spring 1999.

Contact your favorite software retailer for special product launch pricing.

www.corel.com

This advertisement was designed and created using award-winning Corel graphics software.

Copyright © 1998 Corel Corporation. All rights reserved. Corel, Corel PHOTO-PAINT, Paint different, WordPerfect and the Go further logo are trademarks or registered trademarks of Corel Corporation or Corel Corporation Limited. Apple, Macintosh, PowerBook, Power Macintosh, QuickTime and Mac OS are trademarks or registered trademarks of Apple Computer, Inc. and are used under license. Adobe and Photoshop are trademarks or registered trademarks of Adobe Systems, Incorporated. MetaCreations and Painter are trademarks or registered trademarks of MetaCreations Corporation. Windows is a registered trademark of Microsoft Corporation. All other product, firm and company names and logos are trademarks or registered trademarks of their respective corporations.

COREL
Go further™

Choose 78 at www.macworld.com/getinfo



FREE Guide to Power Protection

Learn How to Choose the Right UPS

- ☐ **YES!** I want to know how to choose the right UPS for my system. Please send me my FREE Solutions guide.
- ☐ **NO,** I'm not interested at this time but please add me to your mailing list.



Name: _____

Title: _____ Company: _____

Address: _____

City/Town: _____ State: _____

Zip: _____ Country: _____

Phone: _____

Brand of UPS used? _____ # _____

Brand of Mac used? _____ # _____

Brand of Servers used? _____ # _____

Just mail or fax this completed coupon
for your FREE Solutions Guide. Better yet,
order it today at the APC Web site!

<http://promo.apcc.com>

KEY CODE
h9842

(888) 289-APCC x8424 • FAX: (401) 788-2797

APC®

AMERICAN POWER CONVERSION



NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

BUSINESS REPLY MAIL

FIRST-CLASS MAIL PERMIT NO. 36 WEST KINGSTON, RI

POSTAGE WILL BE PAID BY ADDRESSEE



KEY CODE: h984z

Department: C

132 FAIRGROUNDS ROAD

PO BOX 278

WEST KINGSTON RI 02892-9920



How to Contact APC

Call: (888) 289-APCC, *use the extension on the reverse side*

Fax: (401) 788-2797

Visit: <http://promo.apcc.com>,
use the key code on the reverse side




our deepest apologies to pc users, but Yoot™ Tower is coming out on mac first. get your copy at yootmacfirst.com.

MACWORLD'S

Holiday Gift Guide





That time of the year is upon us. From big city to small town, the air is filling with the sounds of holiday cheer. As we approach the traditional gift-giving season, it's the perfect time to start shopping for the Mac users on your list. Whether you're looking for a great game for that nephew with the brand-spankin'-new iMac or a cute accessory for your sister's Power Mac G3, Macworld's Holiday Gift Guide has got you covered.

20 Unforgettable Games
PAGE 72

10 Delightful Discs
PAGE 78

Supreme Stocking Stuffers
PAGE 82

What, Fruitcake Again?
PAGE 86



MACWORLD'S GAME HALL OF FAME  PRESENTS

20 Unforgettable Games

by Cameron Crotty

OUR NATIONAL OBSESSION WITH THE latest fads at the expense of golden oldies has gotten on the nerves of the Macworld Game Hall of Fame's executive committee. "I love new games as much as the next person," opined a Hall curator as she gestured at the iMac running *Tomb Raider II* over in the corner. "But if we ignore the classics, what's the point of having a Hall of Fame?"

So this year when the editors of *Macworld* came knocking at the Hall's front door in sleepy Pittsfield, Massachusetts, we decided to do more than simply induct six worthy new games into the Hall. Instead, we compiled a list of 20 great Mac games, both new inductees and all-time classics. Because regardless of whether it was released this year or five years ago, a classic is still a classic.



DON'T BELIEVE THE HYPE

Tomb Raider II



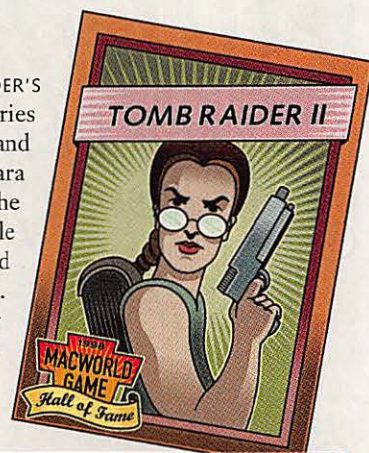
IT'S EASY TO GET LOST IN *TOMB RAIDER*'S hype. We've been inundated by stories about how its star, the well-endowed and completely computer-generated Lara Croft, is either the death knell of the feminist movement or a strong female role model in the male-dominated world of games—or maybe both. What's lost in this storm of publicity and debate is that *Tomb Raider* is simply a great game.

In *Tomb Raider*—a huge seller for Windows and the Sony PlayStation, and now finally available for the Mac—you guide Lara Croft through an *Indiana Jones*-esque three-dimensional world of temples and caverns in search of priceless artifacts. The interface is similar to that of a first-person shooter game such as *Unreal*, *Doom*, or *Marathon*, but your perspective is actually slightly above and behind Lara herself, staring at her polygonal posterior. Lara's adventures involve a lot of gunplay, but exploration and problem solving are the real keys. You find hidden places to explore by swimming, climbing, and jumping, not to mention avoiding diabolical traps such as giant rolling boulders and pits of spikes. The graphics are impressive, especially if you've got a 3-D-accelerator card installed, and the images in the Mac version are clearly superior to those in the PlayStation version.

Tomb Raider II is the first of the *Tomb Raider* games to come to the Mac, and it's a definite improvement over the original game. In addition to walking and running, Lara gets to ride a motorcycle and a powerboat, and she fights villains that are much wilier and harder to kill than those in the original *Tomb Raider*. And there's more *Tomb Raider* on the way—Aspyr Media will release *Tomb Raider Gold*, featuring the original *Tomb Raider* with four additional levels in early 1999.

But back to our original dilemma: does Lara Croft belong in the pantheon of women heroes right alongside Wonder Woman and Buffy the Vampire Slayer, or is she just a pumped-up Spice Girl? The cooler heads at the Game Hall of Fame will leave that up to you. We're just happy that Mac users finally have a chance to play this great action-adventure game.

WHY IT'S COOL: Impressive graphics and game play lead to hours of arcade-style action. **WHO IT'S FOR:** Women tired of male-character-only adventure games and men secure enough to admit that *Indiana Jones* has met his match. **FROM:** Aspyr Media; 512/708-8100, www.aspyr.com; \$50.



Myth: The Fallen Lords



REAL-TIME STRATEGY GAMES CATER TO THE ARM-chair general, but some people prefer the life of an armchair lieutenant. For them, there's Myth: The Fallen Lords, a war game of staggering realism that focuses on individual soldiers fighting individual, *mano a mano* battles.

Want to live with the hellish uncertainty of the battlefield—to be concerned with the advantages (and dangers) of terrain, the threat of ambushes, and the limitations of an army on patrol? If so, then Myth is your game.

Like an officer in the field, you're given a number of troops to command and objectives to accomplish. After that, you're on your own. Myth teaches the importance of reconnaissance, flanking maneuvers, and seizing the high ground—and does it all with a hellishly real 3-D interface that puts you smack in the middle of the battlefield.

Although Myth was the highlight of last year's holiday season, it arrived too late to meet the Hall's strict eligibility requirements for 1997. But we heartily give it the nod this time around as we anxiously await this winter's sequel, Myth II: Soulblighter (see the sidebar "Next Year's Hall Hopefuls").

WHY IT'S COOL:

Amazing 3-D landscapes and challenging, realistic battle strategy. **WHO IT'S FOR:** Bravehearts-in-training who want complete control over their soldiers.

FROM: Bungie Software; 312/397-0500, www.bungie.com; \$40.



A CLASSIC PUZZLER

Shanghai: Dynasty



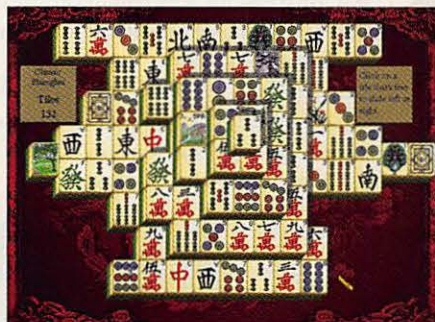
WAR GAMES AND ADVENTURES COME AND GO, BUT a well-designed puzzle game, seasoned with just a touch of random chance, can hold one's attention for years.

Classic Shanghai adds spatial manipulation and strategy to the simple pattern-matching of traditional solitaire. Tiles are randomly piled in a five-layered pyramid, and the object is to remove them by pairing them off. You need a bit of luck to clear the board, but it's your wits that make the difference in Shanghai. Once you've learned the basic game, the challenge of solving a puzzle where you can see almost all the pieces is nearly irresistible.

For Shanghai: Dynasty, Activision has added four other games. There's a child's version of Shanghai and three multiplayer games, including Mah-Jongg. Sadly, the company has not included network play with the Macintosh version this time.

WHY IT'S COOL:

Beautiful graphics and lots of options, plus a classic puzzle that can't be improved on. **WHO IT'S FOR:** Those who prefer quieter pursuits to gunning and running. **FROM:** Activision; 310/255-2000, www.activision.com; \$40.



BEYOND BLOOD AND GUTS

Riven Myst

THE GAME HALL OF FAME RECEIVES MANY VISITORS, generally avid gamers and history buffs. But occasionally, a passerby will poke a curious nose into the Hall's virtual lobby and inquire about the nature of the establishment. Is it truly devoted completely to Macintosh games, and is there a section for someone who likes the idea of computer games but isn't interested in all that shooting, shouting, and general hullabaloo?

That's when our doorman smiles warmly and ushers the visitor into the newly completed Rand and Robyn Miller Atrium, to view the Miller brothers' two masterworks: Myst and Riven. Less like computer games than like wonderfully illustrated novels, both Myst and Riven transport you to a world where deciphering where you are—and why you're there—is all part of the fun. While both games lead you toward a final goal, the true point of Myst and Riven is to explore the gorgeously rendered worlds and the characters that live in them. We heartily recommend both Myst and Riven to gamers and nongamers alike.

WHY THEY'RE COOL: A stunning combination of story line, graphics, and sound pulls you into an amazing fictional world. **WHO THEY'RE FOR:** People who enjoy beautiful graphics, brain-teasing puzzles, and games that don't induce too much stress. **FROM:** Red Orb Entertainment; 415/382-4777, www.redorb.com; Myst, \$30; Riven, \$40.



SimCity 2000 Special Edition

★★★½

THE TAMAGOTCHI CRAZE SEEMS TO HAVE COME and gone, thankfully, but we've all still got that urge to nurture a living thing without the attendant mess. In SimCity 2000, your city itself is a living, breathing organism with intricacies that put the Tamagotchi to shame.

From the initial groundbreaking through labor strikes, earthquakes, political upheaval, and traffic jams, SimCity 2000 puts you in the hot seat as mayor, city council, and dictator-for-life all rolled into one. Your job is simple: keep your citizens happy. You can build the perfect Smallville, USA, or strive for a metropolis to rival New York. SimCity 2000 takes the vision of the original SimCity and adds significant complexity.

Sure, SimCity 2000's been around for years. But it still keeps us coming back for more. Don't be surprised if you find yourself leaving your Mac on at night and waking up early just to see how your city grew.

WHY IT'S

COOL: Endless possibilities make it truly addictive.

WHO IT'S FOR: Mayoral hopefuls—and would-be Godzillas. **FROM:** Maxis; 650/513-7555, www.simcity.com; \$40.



Civilization II

★★★★

PEOPLE DON'T USE THE TERM *GLOBAL CONQUEST* anymore unless referring to Microsoft. But if you do, Civilization II will provide the scope you need.

Civilization is one of the few turn-based strategy games (in which each participant—human or computer—takes turns) that we recommend. But in this case, you'll be thankful for the extra time to contemplate your moves. Civilization II is immense, offering you the chance to build an entire civilization up from almost nothing. You begin with some settlers and fertile land, and start to build cities. If you're skillful, you can "win" at Civilization II without even firing a shot. But after thousands of years of pacifying your citizens and bluffing aggressive competing civilizations, you'll still feel as if you've been through a war.

WHY IT'S COOL: Complexity that will keep even the hardest-core strategy gamers engrossed.

WHO IT'S FOR: Closet Napoleons who like the idea of taking over the world. **FROM:** MacSoft; 612/509-7600, www.wizworks.com/macsoft/; \$50.



Unreal

★★★★½

THE CURATORS AT THE Game Hall of Fame have grown a little tired of stalking through corridors, weapon bobbing, firing at beasts of questionable origin for little more purpose than to watch them explode. Run, shoot ... yawn.

At least, that's what we thought before we launched Unreal. Mind you, this is one of several games this year that absolutely require 3-D-acceleration hardware. That said, Unreal took our breath away with fluid moves and scary monsters.

We don't induct new games into the Hall if they're simply eye candy. Unreal leaves room for atmosphere, exploration, and plot. Instead of facing hordes of easy-to-kill monsters, you're up against enemies that are smaller in number but incredibly ferocious and devious, and the story line stays strong throughout the game.

WHY IT'S COOL: Brains are as important in this game as brawn. **WHO IT'S FOR:** Gamers with 3-D-acceleration hardware who want strategy with their action. **FROM:** MacSoft; 612/509-7600, www.wizworks.com/macsoft/; \$50.



The iMac Makes a Play for Gamers

When Apple announced the low-cost iMac, the Game Hall of Fame executive committee threw a party. Why? In the eyes of the Hall, a consumer Mac is a gaming Mac. And now that we've had a chance to spend some quality time with an iMac, we know that's the truth.

The iMac has everything the average Mac gamer needs. It's fast: The iMac's 233MHz chip is the lowest on the PowerPC 750 totem pole, but all the G3 chips are *much* faster than the older PowerPC CPU's. Even better, the iMac comes with 3-D-acceleration hardware built in. It isn't cutting-edge, but for most of the games shipping through the next year, it'll be fine.

Apple also packed plenty of fringe benefits. There's adequate RAM, a big hard drive, and a fast CD-ROM. The 15-inch display is sharp and bright, and the speakers kick out good sound. There's built-in Ethernet for network play over a LAN, and a fast-as-it-gets 56-Kbps modem for connecting to the Internet. The Universal Serial Bus, or USB, is also a boon. Joystick and other game-input-device companies can now make a Mac version simply by writing a software driver.

The hard-core gamers will howl for faster processors and zip-pier 3-D hardware, but you'd be hard-pressed to buy a significantly more capable system for even twice the iMac's cost. Take it from the Game Hall of Fame—the iMac rocks.



Marathon Trilogy Box Set



MAYBE IT'S THE FLUID, ALIEN ARTWORK. PERHAPS IT'S the planet-hopping, psychological thriller of a story line or the high-explosive fun of network death matches. Whatever it is, in today's go-go, true-3-D world of first-person gunplay, the Marathon games collected in this omnibus edition remain a great value. Enamored as the Hall's staff is with the latest and greatest, Marathon has retained a firm place in our roster of regular network-based multiplayer grudge matches.



CLASSIC GAME

The sheer scope of the Marathon box set staggers even the most voracious gamer's imagination. Inside, Bungie has packed the three complete adventures that make up the Marathon Trilogy, the pre-Marathon adventure Pathways into Darkness, and level and environment editors that open Marathon's doors to anyone with a creative itch. This is a gift that smiles on those without the latest Mac hardware. You can play the Marathon games on a modestly equipped Power Mac 7100 without feeling as if you're watching a slide show.

WHY THEY'RE COOL:

Great network multiplayer games and an endless assortment of levels. **WHO THEY'RE FOR:** Offices that need to blow off steam; gamers with slower Power Macs. **FROM:** Bungie Software; 312/397-0500, www.bungie.com; \$40.



You Don't Know Jack: Huge



FORGET TRIVIAL PURSUIT, THE BOARD GAME THAT'S sure to drive your guests away (or put 'em to sleep). You Don't Know Jack is a game of trivia, but one that harnesses the multimedia power of your Mac to immerse up to three players in a dead-on re-creation of a game show, right down to the twitch-inducing need to beat your opponents by buzzing in first.

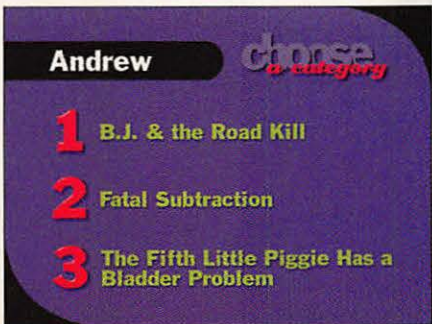


CLASSIC GAME

The secret is the game's boundless, irrepressible multimedia energy. The instant the game launches, a barrage of audio thrusts you into a bustling sound studio. The show's host is even more manic—an archly hip, acidly sarcastic mix of early Bill Murray and David Spade. When the host isn't squeezing the most out of a carefully tuned innuendo or crushing your ego after a wrong answer, you'll be grooving and grinning to the game's collection of musical cues and wacky sound effects. (The You Don't Know Jack: Huge package includes original Jack volumes 1 through 3, for a total of 2,400 hilarious brain-teasing questions.)

WHY IT'S COOL:

Music, sound effects, and attitude make it feel like a real game show. **WHO IT'S FOR:** People who are convinced they're smarter than those TV game-show contestants. **FROM:** Berkeley Systems; 510/540-5535, www.berkeleysystems.com; \$40.



Escape Velocity: Override



ESCAPE VELOCITY: OVERRIDE IS A RINGING TRIUMPH of sci-fi action-adventure. The game puts you in a spaceship cockpit as a daring, swashbuckling, Han Solo type. You start with a lousy shuttlecraft, some seed money, an enormous galaxy to explore—and nearly unlimited freedom to explore as you like, trying to make money and improve your ship and your social standing. Sure, you can be an honorable merchant or cozy up to one of the powerful interstellar governments. But you can also chuck it all and play evil space pirate.

Escape Velocity: Override is also a little-guy-makes-good story: Ambrosia Software builds world-class games for the Mac—and *only* the Mac. From Maelstrom, a cheeky Asteroids-for-the-nineties, to the addictive adrenaline rush of PegLeg, Ambrosia's games have continued to set a standard of quality for games on *any* platform. Your friends with PCs don't know what they're missing.

Escape Velocity: Override is less a game that you play from beginning to end than it is something you play with. And like its parent company, it's simply the best at what it does—on any platform.

WHY IT'S COOL: A near-perfect blend of action, strategy, space exploration, and pure adventure. **WHO IT'S FOR:** Wannabe Han Solos—and Boba Fetts. **FROM:** Ambrosia Software; 716/325-1910, www.ambrosiasw.com; via download, \$25; with Ambrosia CD-ROM, \$30.



Cameron Crotty is a freelance writer and veteran Game Hall of Fame curator.

Tie Fighter X-Wing

MORE THAN ONE ASSISTANT CURATOR AT THE GAME Hall of Fame is a closet *Star Wars* fanatic. Yet even those less devoted to the ways of the Force appreciate LucasArts' masterly space-combat games, Tie Fighter and X-Wing.

These games aren't *really* light simulators—nothing even remotely related to the true laws of physics exists in this galaxy far, far away—so the result is World War II-style, check-six dogfighting. But it's a thoroughly enjoyable fantasy.

The only thing missing from these games is the ability to fly head-to-head against a friend. Unfortunately, LucasArts' hot-and-cold relationship with Mac gamers is currently running cold. So while PC users can blast their friends out of the sky while playing X-Wing vs. Tie Fighter over a network, Mac users have to go it solo.

WHY THEY'RE COOL:

You get to fly a hot spaceship and pretend you're Luke Skywalker (or that you're shooting at him)—what could be cooler? **WHO THEY'RE FOR:** Joystick-equipped flying aces who can bull's-eye womp rats at 50 meters. **FROM:** LucasArts Entertainment; 415/472-3400, www.lucasarts.com; Tie Fighter, \$30; X-Wing, \$20.



F/A-18 Korea



EVEN THE MOST DEDICATED MAC gamer can sometimes glance enviously over at the Windows world, awash as it is in a veritable sea of games. But when it comes to flight simulators, Mac gamers have no need to be envious. Graphic Simulations' F/A-18 Korea is one of the best, period.

From the first day that F/A-18 Hornet hit the streets, it offered a spectacularly realistic flying experience, and each subsequent release has managed to improve on that first rush of realism. With a 3-D-accelerator card in place, F/A-18 Hornet is so realistic that you'll stare in disbelief . . . until you get smoked by a surface-to-air missile, of course. Lesson learned: don't *ever* take your hands off the control stick!

The flight-simulator category is a hotly contested one at the Hall. Parsoft's excellent A-10 Attack: Cuba (972/379-4462, www.parssoft.com; \$46) runs a close second to F/A-18 Hornet.

If you prefer to spend time moving mud on ground attacks, A-10 Attack puts you in the driver's seat of the rough, tough Warthog. But whichever you prefer, take comfort: the Mac excels when it comes to flight simulators.



WHY IT'S COOL: Stunning graphics and impressive air combat will make you believe your life's actually in danger. **WHO IT'S FOR:** Amateur fliers for whom aviation means nothing without a little dogfighting. **FROM:** Graphic Simulations; 972/386-7575, www.graphsim.com; \$45.

Diablo

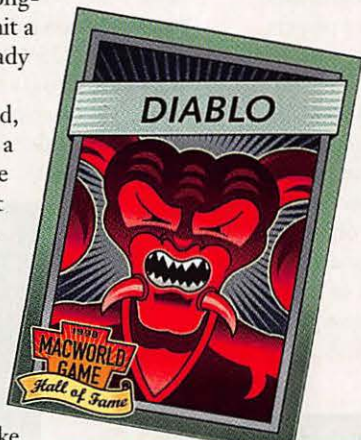


ROLE-PLAYING GAMES CAN BE A LOT OF FUN, BUT THEY USUALLY REQUIRE an attention to numeric detail reserved for highly paid accountants. If you haven't memorized exactly what that helmet will do to your hero's armor class, or how using a long-sword will affect his chances to hit a particular creature, you've already sealed your doom.

Diablo, on the other hand, retains all the stuff essential to a good fantasy role-playing game but builds it into an interface that lets you concentrate on the adventure at hand. Furthermore, the game casts off the usual turn-based structure in favor of exciting, real-time play. The game's painstakingly animated characters are also enchanting. Even if you don't generally like fantasy games, you'll be enthralled.

WHY IT'S COOL:

Attractive graphics and usable interface get you into the game's fantasy world. **WHO IT'S FOR:** Anyone who's wished Dungeons and Dragons had more adventure and less dice rolling. **FROM:** Blizzard Entertainment; 310/793-0600, www.blizzard.com; \$30.



Starcraft

ONE FACTION IN THE HALL'S brain trust constantly squawks that for every original game that's released, there are dozens of sequels and imitations. But repetition can breed improvement.

There's no better evidence than *Starcraft*. Just as with its predecessor, *Warcraft*, you build up your resources and send legions of troops into battle—but this isn't just a rehash of *Warcraft* with better graphics. *Starcraft*'s three warring races (human, the buglike zerg, and the mechanical protoss) aren't mirrors of one another—their capabilities are radically different. Each species requires different strategies for victory.

If you're already a fan of real-time strategy, *Starcraft* doesn't disappoint; if you haven't yet succumbed to the heady thrill of ordering troops into battle—against a computer or against real-life opponents in a rousing network game—here lies a highly entertaining tour of duty.

WHY IT'S COOL: More-complex characters put a challenging spin on a classic warfare game. **WHO IT'S FOR:** Strategy-minded warriors. **FROM:** Blizzard Entertainment; 714/955-1380, www.blizzard.com; \$45.



Links LS

★★★★½



WE AT THE GAME HALL OF FAME RARELY HAVE TIME for a round of golf, what with the critical life-or-death decisions we make on a daily basis. So when we need a break, we retreat to the sweet serenity of *Links LS*.

Links LS's gorgeous graphics make us feel as if we're teeing off into a postcard. The ingenious controls are simple enough to be comprehended in a couple of holes, yet nearly impossible to master even after hours of practice. For the latest version, Access Software digitized Arnold Palmer; you can use his form as your alter ego or play against him as one of four other characters. (Other golfers and courses are available as add-on packs.)

Our favorite part about *Links*, though, is the way it mirrors the actual game of golf. Both games require a patient, contemplative approach. Use too much force, and the next sound you'll hear is a ball crashing through the treetops. At least with *Links LS*, you don't have to go hunt for it.

WHY IT'S COOL: Eye-popping realism, from the graphics to the frustration of a flubbed putt. **WHO IT'S FOR:** Duffers upset that their local course doesn't let them play after dark. **FROM:** Access Software; 801/736-7000, www.accesssoftware.com; \$50.



Next Year's Hall Hopefuls

Yes, 1998 was a great year for Macintosh games, and it seems that in 1999 the hits will just keep on coming.

If you couldn't get enough of *Civilization II*, then you'll look forward to Microsoft's *Age of Empires*, due in early 1999. Build your civilization up from the early days in mud huts and conquer the world with your military, enslave it with economic superiority, or dazzle it with your technological advances. A game about total conquest from the folks at Microsoft? We're shocked!

Even as Bungie Software accepts this year's trophy for *Myth: The Fallen Lords*, the company is hard at work on a sequel, *Myth II: Soulblighter*, which should arrive just in time for the holidays. *Myth II* promises more tactical combat action and features more detailed maps, indoor combat, map-creation tools, and (thankfully) a simplified interface. In 1999, Bungie plans on staking out some new ground with *Oni*, a third-person game that fuses martial-arts fighting with gunplay.

Fans of *A-10 Attack* know that when it comes to flight simulators, Parsoft means business. *Fighter Squadron: The Screamin' Demons over Europe* simulates air combat over Europe during World War II. Players can fly a number of American, British, and German planes, from Mustangs to Messerschmitts.

Parsoft will release the Windows PC version (to be published by Activision) near the end of 1998 and follow up with a Mac version.

Multiple Hall of Fame inductee Blizzard Entertainment has promised follow-up releases to both *Diablo* and *Starcraft*. *Diablo II* and the *Starcraft: Brood War* expansion pack are also both expected in 1999.



A Soulblighter dwarf warrior (above) and



A Screamin' Demon in flight.



ENTERTAINING AND INFORMATIVE, THESE CD-ROMS ARE GUARANTEED TO PLEASE

10 Delightful Discs

by Christopher Breen

PERHAPS YOU STARTED LIFE AS AN ADROIT PRESENT-SHAKER. With a single heft, you could judge whether a festively wrapped package contained a model, a book, or—best of all—a toy that saner minds have since banned as unsafe. Over the years these powers haven't diminished a single whit, but today there's a new challenge: the compact disc.

Sure, even the weakest present-shaker can identify a CD's jewel case, regardless of how many layers of holiday wrapping paper adorn it. The real trick is trying to figure out what's inside. It could be an audio CD, but it could also be a CD-ROM containing anything from an encyclopedia to a virtual planetarium to an art studio for the kids. Regrettably—from the ace present-shaker's perspective, anyway—it's now possible to give a gift whose identity remains hidden until the wrapper is removed.

Now you know how to disguise the perfect gift. The real question is, which disc should you give? We can help there as well. Join us as we survey the best of the best in *Macworld's* holiday list of ten great gift CD-ROMs.

The Complete MasterCook Suite



BULK WINS OUT OVER BEAUTY IN THE COOKING CATEGORY. Although Brøderbund's Williams-Sonoma Guide to Good Cooking CD-ROM sports a superior interface and is clearly the most attractive of the electronic cooking guides, Sierra On-Line's The Complete MasterCook Suite includes far more recipes. Plus, it allows you to enter your own culinary creations into the program's recipe database. The Suite includes three cookbooks—MasterCook Deluxe, which includes 3,000 classic American recipes; Cooking Light, offering 1,450 low-calorie meals; and Graham Kerr's Swiftly Seasoned, with 140 recipes for low-fat meals that can be prepared in under 20 minutes. To give you an idea of the scope of this collection, we were able to find 11 recipes that included—ugh!—lima beans. To locate the recipes that include this loathsome legume, we used the program's search engine to filter recipes by ingredient. You can also filter by food category, recipe name, preparation time, cost, and nutritional information. In addition to a slew of recipes, The Complete MasterCook Suite includes video tips for performing common kitchen tasks such as beating an egg and grilling vegetables.

Those who have a feel for food and care more for content than presentation will find The Complete MasterCook Suite to be quite a tasty treat.

Sierra On-Line; 425/649-9800, www.sierra.com; \$50.

Kid Pix Studio Deluxe



JUNIOR ART

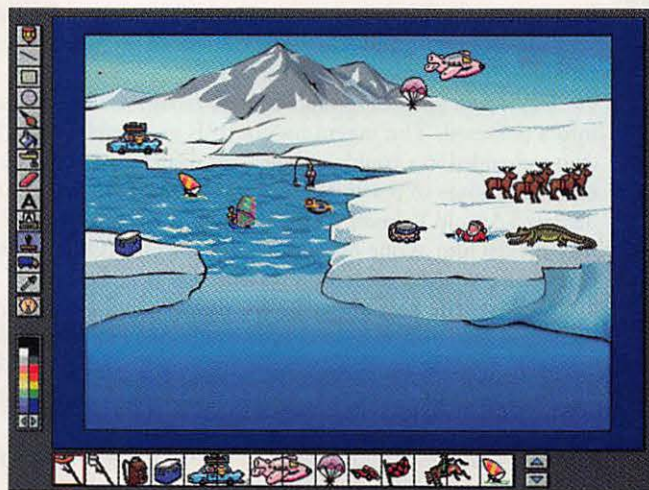
FAILING TO INCLUDE KID PIX IN A LIST OF GREAT CD-ROMS would be nothing short of criminal. Not only has Brøderbund sold—in one form or another—a jillion copies of this program, but it's still one of the most entertaining and useful tools available for those whose art gallery of choice is the one on the family fridge.

Kid Pix Studio Deluxe, at its most basic, is a painting program for kids. It features all the tools you'd expect in a painting application—pencil, brush, eraser, fill, line, eyedropper, and text. Beyond these basics, Kid Pix goes the extra mile and tosses in a wacky variety of brush effects, a multitude of colorful backgrounds, and a gallery of stamps.

Kid Pix Studio Deluxe also allows your kids to produce multimedia slide shows, complete with pictures, sounds, and transitions. For instance, it lets them stage and record a puppet show with the program's cast of characters. Should your child need a little help in the guise of prerendered images or sounds, the CD-ROM has them in spades—clip art, background patterns, sounds, and stamps abound.

If you have a kid, a Mac, and 30 bucks to spare, you should also have Kid Pix Studio Deluxe.

Brøderbund; 415/382-4400, www.broderbund.com; \$30.



With the help of the Kid Pix stamp tool, even nonkids can turn out artwork worthy of the family fridge.

RedShift 3



IF YOU'VE EVER GAZED INTO THE NIGHT SKY AND PROUDLY proclaimed, "That's the North Star!" only to be told that the bright object you're pointing to is Sirius and you're actually facing southwest, then RedShift 3 is for you. Even those who can differentiate between Cassiopeia and Cepheus will find a lot to like in this CD-ROM. Built for amateur and advanced astronomers alike, RedShift 3 correctly displays the configuration of the heavens as seen from numerous locations around our solar system, at any time, during any day, from January 1, 4713 B.C. to A.D. December 31, 9999. If that many years is too much to fathom and you just want to know what's happening in the skies during the next 12 months, you can create a Sky Diary that lists astronomical events such as eclipses, phases of the Moon, and meteor showers.

RedShift 3 offers more than 50 astronomical tours: from the birth of the universe to the creation of our solar system's planets to the invention of spaceflight. And if a new celestial body—a new comet, for example—hits the headlines, you can download that information from the RedShift Web site and update your copy of RedShift 3 to include the latest news. RedShift 3 is, in more ways than one, a stellar achievement.

Piranha Interactive; 602/491-0500, www.redshift3.com; \$50.

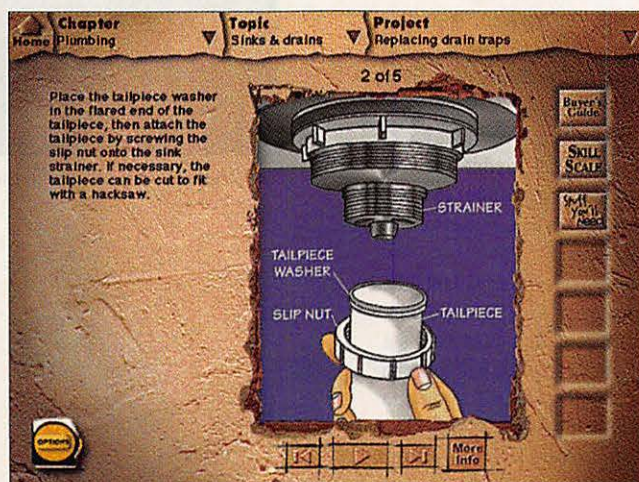
Home Improvement 1-2-3



IF YOU THINK CALLING APPLE TECH SUPPORT IS EXPENSIVE, just wait until you have to bring in a plumber on December 25 to replace the fruitcake-choked trap beneath your kitchen sink. After paying quadruple overtime for this service, you may kick yourself for not having ponied up a mere \$30 for Multimedia 2000's Home Improvement 1-2-3. Despite being splattered with gratuitous references to cosponsor Home Depot, Home Improvement 1-2-3 is the best electronic home-repair reference you can buy. Unlike other home-repair CD-ROMs, Home Improvement 1-2-3 doesn't presume you're a trained handyman. As a result, its instructions for plumbing, woodworking, electrical, and painting projects are straightforward. The projects range from relatively simple jobs such as installing a light switch to more-demanding tasks such as replacing a toilet.

Each project is presented as a series of steps, and if you like, you can have the instructions read to you—which will be particularly helpful when your head is stuck through that large hole in your ceiling. Each project also includes a list of required materials and tools as well as a Skill Level guide that indicates how long it will take people with different aptitudes to complete a job. Home Improvement 1-2-3 is a very handy CD-ROM indeed.

Multimedia 2000; 206/622-5530, www.m-2k.com; \$30.

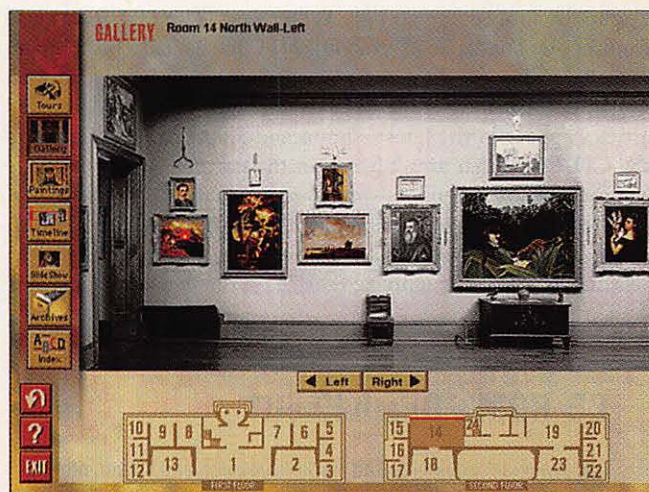


Even if you're all thumbs, Home Improvement 1-2-3 will make you handier about the house.

A Passion for Art



CORBIS PUBLISHING HAS A PASSION FOR BEAUTIFULLY REALIZED CD-ROMs—the company's Critical Mass, Leonardo da Vinci, FDR, and Volcanoes: Life on the Edge are all outstanding packages. But A Passion for Art does them all one better. This 1995 CD-ROM explores the private art collection of Dr. Albert Barnes—a wealthy American who, during the 1920s, scoured Europe for the works of such renowned postimpressionist painters as Renoir, Cézanne, Picasso, and Matisse. Because the Barnes Foundation—Dr. Barnes's home for all of his acquired art—was open to the public for only a few years, many of the paintings in the collection are unknown to casual art enthusiasts.



Even connoisseurs will be impressed by Dr. Barnes's collection of postimpressionist paintings in A Passion for Art.

A Passion for Art presents the artwork in a variety of ways. You can choose to take a guided tour, with narration provided by some of today's art experts. If you're the kind who likes to stroll through galleries with no guidance, you can visit each room of the Barnes Foundation and click on the paintings to take a closer look as well as access information about the work and the artist. The paintings are nicely reproduced, and you're provided with a Super-Zoom function that allows you to carefully examine each and every brushstroke.

Those passionate for—or simply interested in—the art of this period should be sure to add this CD-ROM to their own private collection.

Corbis Publishing (sold through Hoffman & Associates); 888/464-5652; \$30.

Encyclopædia Britannica CD: 1998 Standard Edition



THE ENCYCLOPÆDIA BRITANNICA CD HIGHLIGHTS ONE OF the strengths of CD-ROM technology—the ability to store massive amounts of information on a single disc. Unlike Microsoft's Encarta and the 1999 Grolier Multimedia Encyclopedia (see *Reviews*, in this issue), the Encyclopædia Britannica is not a multimedia marvel. It eschews QuickTime movies and an abundance of digital images in favor of text that digs more deeply into a subject. Although the 1998 Standard Edition carries about 4,000 graphics and illustrations, the disc offers a comprehensive resource rather than one that's merely attractive.

The 1998 Standard Edition makes improvements over previous years' editions. Although a Web browser is still required in order to use the Encyclopædia Britannica CD, the current edition's interface is a big improvement on the previous edition (which essentially looked like an ugly Web page). The CD-ROM still features an abundance of Web links (15,000 of 'em), but they no longer look like the final exam in a basic Web-authoring tutorial. In addition to an expanded set of Web links, 789 new or revised articles appear in the latest edition and 5,000 articles appear on the CD-ROM that aren't found in the current, multivolume—and much more expensive—print version of the *Encyclopædia*.

Dry though it may occasionally be, the Encyclopædia Britannica CD will be a welcome addition to your reference library.

Encyclopædia Britannica; 800/747-8503, www.eb.com; \$85.

CD-ROM's Death Knell?

As new technologies and markets develop and flower, others fall by the wayside. Such appears to be the case for the once mighty CD-ROM reference disc. In a sign of things to come, Microsoft and Corbis Publishing have halted development on future CD-ROM reference products.

The reason they give is the bottom line. As marvelous as all these discs are, most have a necessarily narrow focus—wine, past presidents, and early twentieth-century European art, for example. Sadly, CD-ROM reference discs simply don't make enough money to justify their production costs.

Furthermore, with the growth of the Internet and improved modem speeds, greater numbers of computer users are turning to the Web for reference information. Although few Web sites can match the quality of the CD-ROM multimedia experience, the Web has this obvious advantage: information can be updated within a matter of minutes. Many recent CD-ROM reference discs now include an online component to keep information reasonably up-to-date, but online updates still can't match the immediacy of a Web site.

This doesn't spell the end for all reference CD-ROMs. Reference materials such as encyclopedias, atlases, dictionaries, magazine archives—in short, any large clump of data that in print form would consume a midsize bookshelf—is still a prime candidate for electronic storage. With DVD shortly to assume the mantle of Master of High-Capacity Media (see "DVD: Now Playing," November 1998), future reference discs should become even more comprehensive and interactive.

Logical Journey of the Zoombinis Deluxe



PITY THE POOR CHILD WHO UNWRAPS A COPY OF LOGICAL Journey of the Zoombinis in a house where grown-ups run wild. There the nine-year-old or older tyke sits, happily solving one of Zoombinis' 48 puzzles, when a curious adult happens by, glances at the Mac monitor, scoots the kid aside, saying, "Let me try that for a second," and never relinquishes the mouse.

In the world of this kids' CD, you control a collection of Zoombinis—jelly bean-like characters who have recently escaped from their conquered homeland. Your job is to lead the Zoombinis to a new Promised Land by solving 48 logic puzzles along the way. Don't tell the kids, but these puzzles work those mental muscles responsible for pattern recognition, sorting, mapping, grouping, and data sequencing.

Thankfully, the puzzles are engaging enough that children may not realize they're learning as they play. For example, who would suspect there was any educational value in determining which combination of five pizza toppings will satisfy the Tree Troll who bars your path?

Unlike many other "edutainment" CD-ROMs, Logical Journey of the Zoombinis is replayable. Don't toss that disc after your first time through!—the answers to each of the puzzles change whenever you march a new group of Zoombinis down the path. Add this to the game's enticing play and brain-bending puzzles, and you've got a disc sure to please kids and adults alike.

Broderbund; 415/382-4400, www.broderbund.com; \$30.



The Zoombinis must create the perfect pizza for this picky troll.

Sunset Western Garden CD-ROM



WHETHER YOUR THUMB IS BROWN OR GREEN, THE SUNSET Western Garden CD-ROM is likely to prove a boon to your botanic buddies. Based on a veritable bible of the gardening world, Sunset's *Western Garden Book*, the Western Garden CD-ROM contains descriptions of more than 6,000 species of plants found in the western United States. No need to page through each of these species, however. By entering your zip code in the Encyclopedia section's Climate Zone dialog box, you can view only those plants that grow in your area. Another way to filter your search is through the Plant Selector section, where you search for plants, based on plant type, growing season, sun and water requirements, and climate zone.

Each Plant Description window carries a zoomable picture of the plant, a text box that provides details about the plant and hints for its care, and an audio clip with the pronunciation of the plant's botanical name. From within the Plant Description windows, you can add individual plants to your personal plant catalog.

If your gift-getter lives somewhere east of the Rockies (or way north or south), consider Multimedia 2000's *Better Homes and Gardens Complete Guide to Gardening* (206/622-5530, www.m-2k.com; \$20). Although not as complete as the Sunset CD-ROM, it includes plants that grow in regions other than the West.

Sunset Publishing; 650/321-3600, www.sunsetmagazine.com; \$50.

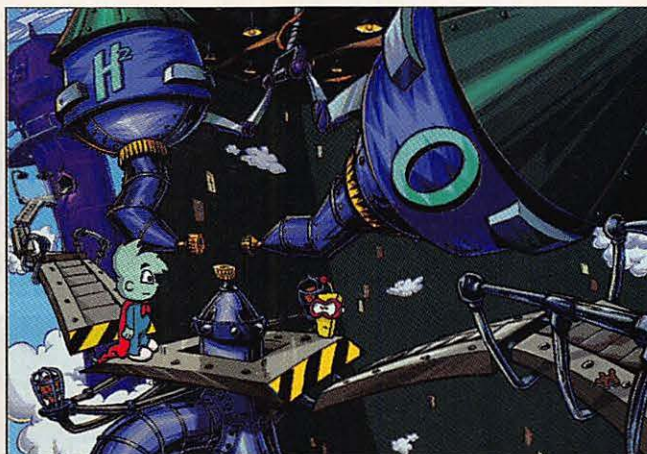
Pajama Sam 2: Thunder and Lightning Aren't So Frightening



PAJAMA SAM, THE WORLD'S ONLY SUPERHERO LEGALLY ENTITLED to order off the children's menu, is back with a new adventure. This time Sam journeys to the headquarters of World Wide Weather, the conglomerate responsible for producing the thunder and lightning that gives our caped crusader the heebie-jeebies. Just as the diminutive dynamo learns to be comfortable with atmospheric events, he accidentally pushes the Big Red Button that throws the world's climate into a tizzy—hurricanes in Toledo, snow in Hawaii, and most disturbing of all, *sunshine in Seattle!* To put things right, you must take the role of Pajama Sam and track down the missing pieces of the company's weather machine.

As with Humongous Entertainment's popular *Freddi Fish* series, Pajama Sam's world is filled with enough clickable, animated objects to keep a young child entertained for hours. And should your tot tire of hunting and gathering clues, a simple, Parcheesi-like board game is available at all times. Kids who like adventure games will love Pajama Sam 2. Those who exceed the game's recommended age range, 3 to 8, will also be charmed.

Humongous Entertainment; 425/485-1212, www.humongous.com; \$30.



The weather's broken and only your child and Pajama Sam can bring about sunnier times.

The Complete National Geographic



THE COMPLETE NATIONAL GEOGRAPHIC IS A CD-ROM PACKAGE that's both gloriously overwhelming and frustrating. Gloriously overwhelming because every page of every issue from late 1888 to December 1997—including advertisements—was scanned into this 31-disc collection. Frustrating because (a) the material looks fine on a monitor but prints poorly due to the low resolution of the scans, and (b) a 31-disc enterprise necessitates a lot of disc swapping.

Then why is *The Complete National Geographic* one of our top picks? Because you just can't get this material anywhere else. Despite its rough edges, this collection is an awesome testament—good and bad—to the natural and human experience of the past



No use crabbing—that black line appears between every pair of *The Complete National Geographic's* history-rich pages.

110 years. You won't find rich multimedia elements here, but the search engine is reasonably fast and efficient. It lets you filter your search by issue and range of dates, and you can bookmark favorite pages. Additionally, the program's Home page provides a Web button that launches your browser and takes you directly to the National Geographic Web site—another marvelous resource.

If you're wondering what you've missed during the last century—or just want to clear your basement of old magazines—*The Complete National Geographic* is a natural.

Mindscape; 415/895-2000, www.mindscape.com; \$180. **m**

Contributing Editor Christopher Breen's enthusiasm for consumer CD-ROMs is matched only by his disdain for lima beans.



GOOD TIDINGS FOR MAC GIFT GIVERS

Supreme

AS YOU'RE DASHING THROUGH the snow in search of the perfect stocking stuffer, consider picking up a copy of Macworld's Holiday Gift Guide. Because if you're having trouble finding that little something for that special someone, you need look no further. *Macworld* has taken the hard work out of this year's shopping frenzy by finding great gift ideas for the Mac fans on your list. So before you hang your stockings by the chimney with care, check out these cool new Mac products.

EarSaver



SOOTHING SOUNDS

IF THE INCESSANT DRONE OF YOUR computer's fan or your chatty coworker in the next cubicle sometimes puts you over the edge, EarSaver 1.0 (\$29.95 list price), from Synthetic Productions (201/568-8282, www.earsaver.com), may be just the solution for you. EarSaver plays a soothing blend of synthesized music and natural sounds through your computer's speakers or headphones. EarSaver uses a measly 1.6MB of RAM and hardly any disk space, and it's even compatible with older,



It's almost as soothing as the sound of silence.

68030-based Macs. Also, unlike some audio programs, EarSaver almost always keeps on playing smoothly, even with virtual memory activated. Along with the EarSaver application, you get four hours of digital tracks that run the gamut from chirping crickets to free-form new-age compositions.

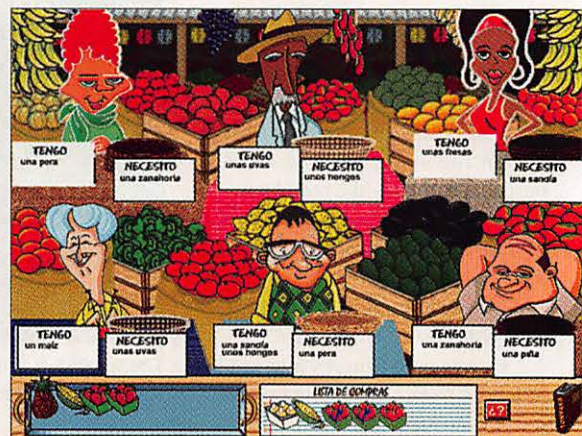
Although EarSaver doesn't promise to completely do away with annoying sounds, it did make one of my kids stop screaming, if only for a few minutes.—FRANKLIN N. TESSLER

Spanish for the Real World



¡ESPAÑOL PARA TODOS!

SET IN A TRANS-MEXICO CAR RALLY, Spanish for the Real World (\$30 company's estimated price), from Knowledge Adventure (310/793-0600, www.knowledgeadventure.com), takes players on a fun-filled road trip through the Spanish language. Along the way, virtual competitors challenge you to puzzle-solving games. Complete each puzzle and you zoom ahead to the next *ciudad* along your route, moving on to another game that builds on your grammar, vocabulary, or verb-conjugation skills. Make it to the *meta* (finish line) in first place and you earn a slot in the next rally; vocabulary and logic skills get increasingly difficult with each rally. Although primarily geared toward high-school-age players, older students and parents will find the puzzles challenging, too; if you get stuck, a dictionary of phrases helps out. Unlike many competing products, the Mac version of Spanish for the Real World (and its French equivalent) offers the same features as its PC sibling, including the ability to record your voice to compare your pronunciation with that of the characters in the story. For first-year *estudiantes*—or anyone looking to polish his or her *Español*—there's no better holiday gift.—ANITA EPLER



This mercado is always abierto.

Stocking Stuffers

StickerPix



HOMEMADE ADHESIVES

IF YOUR KIDS SPEND THEIR HARD-earned allowance on those kiosks that spit out little photo stickers with goofy backgrounds, you'll understand the allure of StickerPix (\$40 list price), from XLsoft (714/453-2781, www.xlsoft.com). It's simple fun: you import a photo you've scanned or downloaded from a digital camera, pick one of 250 or so backgrounds, add extra text or little images, and use an ink-jet printer to print your creation onto sticker paper. You can print any size stickers by choosing from templates or creating your own, so you're not limited to just teeny



Seal it with a sticker.

photographs. StickerPix's colorful interface sports big, friendly buttons and easy-to-understand tabs that even parents will know how to use. But you don't need kids to have fun with StickerPix—I've littered office, home, and neighborhood with little adhesive pictures of myself. Just make sure you have lots of free disk space first—StickerPix's fun background files clog up about 22MB.

—BROOKE C. WHEELER

This CD will show you that roses aren't just red.

Growing Good Roses



GET A GREEN THUMB

IF HALF THE FUN OF GROWING ROSES is tending to their every need, surely the other half is plotting your next purchase. Growing Good Roses (\$24.95 list price), from Multimedia 2000 (206/622-5530, www.m-2k.com), will help you do both. Featuring homespun wisdom and guidance from rose expert Rayford Clayton Reddell, this CD-ROM is packed with helpful videos, photos, and articles. The illustrated Garden-er's Notebook offers tips on everything from buying and planting to cutting and exhibiting, and 25 videos walk you through the trickier aspects of rose keeping. You can view the 300-plus photos by rose name, color, or class. Or sit back and tour famous gardens, such as the Roseaie de l'Haye in Paris or Reddell's own Garden Valley Ranch. More information on each variety would be helpful, as would photos that offer a view of the entire bush rather than just individual blooms. And the videos are a bit too focused on modern roses—if you want to learn how to prune old roses, for example, you're out of luck. Experts may want to stick with books that offer more detail and fewer generalizations, but budding rosarians will find Growing Good Roses a great resource.—LINDA COMER



The X-Files Game



JOIN THE CONSPIRACY

IMAGINE YOURSELF RUNNING ALONG-side agents Fox Mulder and Dana Scully, caught in the web of creepy conspiracies that make *The X-Files* a smash TV hit. The X-Files Game (\$55 company's estimated price), from Fox Interactive (310/369-7000, www.foxinteractive.com), puts you right into a never-before-seen *X-Files* adventure as Craig Willmore, an FBI agent.

What's impressive about this game is its incredible use of Quick-Time video. The video's high-quality production seems to match that of the show itself—the dimly lit world on your com-



The truth is out there—but can you uncover it?

puter screen is consistent with the show's dark and eerie ambience. And most of the show's main players make appearances as well, including agents Mulder and Scully; their boss, Skinner; the wackily enigmatic Lone Gunmen; and the evilly enigmatic Cigarette Smoking Man. The result is probably the most authentic movie- or TV-spin-off game I've ever played.

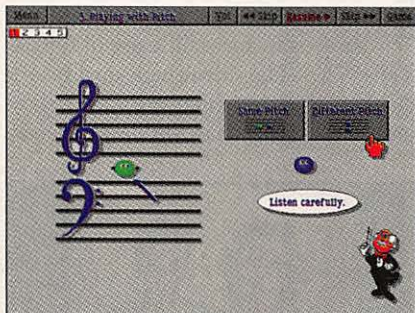
What's not impressive is the game play itself. Too many times I wanted to fast-forward past tedious sections and get back to the action. *X-Files* fans will wish this were less of an adventure game and more of an interactive movie. Still, the attention to detail makes The X-Files Game an intriguing gift for the X-phile on your holiday gift list.—JASON SNELL

Music Ace



IT WON'T TURN YOU INTO A BACH OR a Beethoven—or even a Barry Manilow, for that matter—but Music Ace (\$49.95 list price), from Harmonic Vision (847/467-2395, www.harmonicvision.com), offers an excellent introduction to basic music concepts for musicians of all ages.

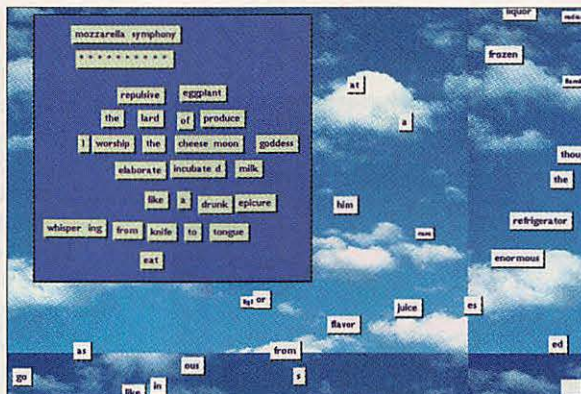
A cartoon conductor named Maestro Max leads you through 24 lessons that teach you about note reading, the piano keyboard, major scales, key signatures, and more. You also learn to develop your listening skills by comparing the sounds of different notes. For each lesson, there's a cor-



Maestro Max teaches more than "Chopsticks."

responding game that helps you develop the skills you've just learned. The program also includes a Doodle Pad that lets you compose your own music or play back songs stored on the CD-ROM. You can even add your own MIDI keyboard for a more realistic playing experience; otherwise, you can use your mouse to hit the keys on an on-screen piano. The material is basic—it overlooks musical elements such as rhythm and form—but Music Ace still provides great unintimidating instruction for beginners of all ages.—STEPHEN BEALE

Fridge graffiti goes digital.



ElectroMagnetic Poetry Kit



THAT UBIQUITOUS ICON OF URBAN Gen X kitchen life makes its way into the computer arena. Cleverly christened ElectroMagnetic Poetry Kit (\$29.95 list price), this CD from Magnetic Poetry (612/338-6399, www.magneticpoetry.com) works on much the same principle as the original flexible refrigerator adornments, with some aesthetic twists:

you can change the font, color, and thickness of your tiles, as well as the color of your work area and the background graphic—at least in theory. On three different Macs I used to test the program, ElectroMagnetic Poetry suffered from some serious interface glitches, including major window-redraw problems, backgrounds not importing properly, and the occasional system crash when reconfiguring style options. Still, the basic premise is entertaining: you choose a word list from eight possibilities—including four foreign languages—and then add handfuls of other words from topics such as Eros, Food, Sports, and other pastimes. As word-tiles float by, you click to add them to your emerging poem; a double-click releases unneeded tiles. The spartan manual (both hard copy and HTML) is remarkably complete, despite some confusing passages and amateurish production values. Like its fridge-based predecessor, ElectroMagnetic Poetry offers a silly way to play with your brain and decorate your desktop, but it could use a lot more polish; in its current state, it feels like hastily ported shareware.—ANITA EPLER

MyTypeArtist



ADD SOME FANCY TO YOUR FONTS. For the artistically challenged, MyTypeArtist (\$19.95 company's estimated price), from MySoftware Company (650/473-3600, www.mysoftware.com), offers an inexpensive way to create quick letter graphics for party invites and simple greetings.

With MyTypeArtist's more than 1,000 themes and typefaces to apply to any word or phrase, you can easily create original stationery and greeting cards for any time of year. Simply type in the text, pick a style from the software's graphics library, and input the style. Thankfully, MyTypeArtist is compatible with most popular word-processing and graphics programs, including Microsoft Word, Adobe Photoshop, and QuarkXPress.



Create your own holiday cheer.

For those looking to send some holiday cheer, MyTypeArtist offers several red-and-green-bedecked font styles, including lithe green letters with little red bows. Of course, there are also elegantly shaded and sculpted characters, groovy textured letters, and flowery script.

Although MyTypeArtist is great for making stationery and simple announcements, you shouldn't consider this software as a solution for business letterhead or stylish Web headers. With MyTypeArtist, you can't alter multiple lines of text at once, you're limited to 40 characters per phrase, and you may miss traditional commands such as bold and italics. But if you're looking to add a little font fun, MyTypeArtist will bring out the Picasso in you.—LAURA LINDHE

The D Show HeadRush

IF YOU'RE WONDERING HOW TO TOP off your next holiday gala, fret no longer. Gather 'round the warm glow of your Mac for a few hearty chuckles with this year's quiz games.

HeadRush (\$29.95 list price) is the latest high-strung bundle of hilarity from the Berkeley Systems folks (Sierra On-Line; 425/649-9800, www.sierra.com) who birthed *You Don't Know Jack*. The pedigree shows in the game's hyperactive style, and the host still sounds like he's got a weasel trapped in his trousers. Be sure not



Fry your brain with more nonsense trivia.

to send the kids off to bed too early, though, as HeadRush aims squarely at the young nippers. Most of the party attendees in tails and cocktail dresses will score on the science and language questions, but the pop-culture references and trivia will have your guests casting about for someone wearing baggy jeans and a beeper.

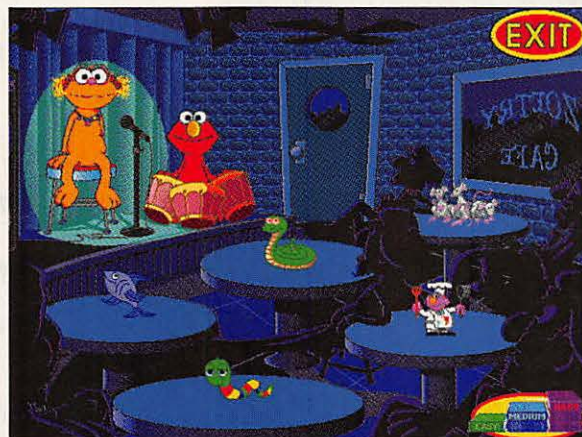
On the other hand, *The D Show* (\$39.99 list price), from Disney Interactive (800/228-0988, www.disneyinteractive.com), may look like a surefire winner for the diaper set, but this disc goes better with a well-mixed dry martini than with a sticky glass of ginger ale. Set to familiar late-1950s orchestral pop, *The D Show* has its share of *Little Mermaid* questions that are sure to set the tykes a-squealing. But most of the trivia is heavy-duty insider stuff, such as the names of voice artists and musical composers, identities of obscure characters from Disney movies, and tidbits about Disney amusement parks around the world.

So swing into the new year with a carefree heart. Even if Uncle Charlie gets too pickled to plunk out "Auld Lang Syne" on the family upright, you'll have the evening's entertainment well in hand.—CAMERON CROTTY

Elmo's Reading: Preschool and Kindergarten

ELMO, *SESAME STREET*'S FURRY RED monster, will tickle you and your little one pink in the two-CD set *Elmo's Reading: Preschool and Kindergarten* (\$34.95 list price), from The Learning Company (617/494-1200, www.learningco.com). In the first CD, *Reading Basics*, your preschooler can choose from six different activities, including rhyming with Zoe, helping Cookie Monster spell, and matching letters to word parts with SuperGrover. The positive feedback and cute animations make each activity loads of fun.

For the youngster who still can't get enough of li'l Elmo, the second CD includes more games and more-advanced activities. Follow Elmo through the looking glass and into an entertaining expedition in *Elmo's Reading Adventure*. In this mystical *Sesame Street* world, your little tyke is plunked into the *Sesame Street* versions of familiar Alice in Wonderland scenes. Who can pass up a grouchy tea party hosted by Oscar himself? The bright colors and simple drawings are inviting, but the pictures don't sport as many clickable animations as those in other products. However, when it comes to playability and appeal, both of these CDs will bring sunny days.—WENDY SHARP



Reading is the top act at this stand-up routine.

Wipe Out


MAYBE YOU'RE ONE OF THOSE PEOPLE who always neatly puts CDs or DVDs—music, multimedia, application, or otherwise—back in their cases. But for the rest of us who are just too darn *busy* (lazy?) to do so, there's *Wipe Out* (\$15 list price) to repair the damage we inflict. I've given this stuff to well-traveled friends whose CDs get road damage; friends with claw-bearing cats; and friends who are just plain careless slobs like me who stack naked CDs on their desk, pile them on the floor near the stereo, and scatter them in the car like gum wrappers. Esprit Devel-



Say bye-bye to trashed CDs.

opment's (908/284-0426, www.cdrepair.com) little bottle of goop clears up even big, scary scratches, such as the one that appeared on my *Blur Modern Life Is Rubbish* CD after a bookcase was dragged over it repeatedly (don't ask). As

long as the damage is in the plastic layer and doesn't reach the inner layer, the Wipe Out fluid and its little cloth can buff it away. Deep scratches take a few repeated applications and extra polishing, but CDs end up essentially as good as new. Of course, the best damage protection is prevention, but tell that to somebody who just inadvertently rolled a desk chair over her system-backup CD-R.

—BROOKE C. WHEELER 

KEVIN CANDLAND



IF YOU'RE TIRED OF LAME, UNIMAGINATIVE GIFTS, YOU'VE COME TO THE RIGHT PLACE

What, Fruitcake Again?

by Andy Ihnatko

THE FOLLOWING LIST OF UNIQUE AND UNUSUAL MAC-related gift items was assembled with one goal in mind: to protect you from turning into the very thing you dreaded as a kid—the relative who gave you the same boring, lousy gift every year.

Don't let yourself end up like Uncle Socks and Auntie Sweater. Instead, remind your beloved friends and relatives of the uncle who surprised them with that autographed photo of Bobby Orr. Believe me, you'll be glad you did. Because it shows that you care. Because it indicates the depth of your friendship. Because you're moving in the spring, and there's no way you're loading up 4 computer systems and 20 cartons of books all by yourself.

Give Them Stuff to Read

Sometimes people have to go to the beach and don't want to expose their \$4,000 PowerBook G3 to sand and sea. One thing missing in the computer world is a satisfying, slimy, and—yes—*bitchy* (in the Jackie Collins sense) tell-all book.

We've got a couple of good stabs at it, though. *On the Firing Line: My 500 Days at Apple* (\$25; HarperBusiness, 1998) is Gil Amelio's personal form of therapy, in which he works out the demons of his hitch as CEO, but it comes across as rather like the sections of George Takei's autobiography in which he talks about William Shatner. Too much personal vitriol without the embarrassing details to back it all up.

Much better, though still short of the ideal, is *Barbarians Led by Bill Gates: Microsoft from the Inside*, by Jennifer Edstrom and Marlin Eller (\$23; Henry Holt & Company, 1998). One author is the daughter of a principal in Microsoft's PR firm and the other is a longtime employee, which adds up to lots of juicy tidbits.

Those uninterested in dirty laundry might prefer the coffee-table approach of *Appledesign: The Work of the Apple Industrial Design Group*, by Paul Kunkel and Rick English (\$45; Watson-Guptill Publications, 1997). This lavish book depicts the wild and wacky world of Apple product design.

Help Them Find Themselves

We're finally at the point where Global Positioning System (GPS) devices are small, inexpensive, and simple enough that they've ceased being the exclusive totems of geeks. A GPS receiver is the perfect gift item, as it's something (a) you'd never buy for yourself and (b) whose fundamental ginchiness doesn't become apparent until you begin to integrate it into your life.

Put it in the car and plug in the coordinates of your destination, and it'll graphically point the way as you go. Pop it into a bracket on your bike, and it'll report your speed and the distance you've traveled. During your vacation in Boulder, Colorado, wear it on a lanyard as you go for your morning walk, and when you collapse half a block later, you can convince yourself that it's because of the 6,297-foot altitude.

Garmin's GPS III (\$299; www.garmin.com), which resembles a slightly oversize black electronic Twinkie, is among the best of the lot. It's got a built-in road atlas that's surprisingly detailed. Garmin doesn't make a Mac interface cable for the GPS III, but Global Mapping Systems (www.gpsy.com) will sell you one for \$40, along with GPSy, the company's stunning \$50 Macintosh GPS software. GPSy lets your Mac collect GPS data and can mark your current location on practically any map source, such as maps from your Street Atlas USA CD-ROM or even a spy-satellite photo of the area.



Bring Out Their Creative Side

You know, the best gifts are the ones you make yourself. So spend the afternoon painting up a loved one's Power Mac G3 tower so it resembles something out of *Babylon 5*.

Spray-painting a Mac case a different color isn't exactly a new idea, but Rust-Oleum has come out with a new and wonderful line of paints, called American Accents (\$3 to \$12, available at your local hardware store), that throw on amazingly detailed patterns in one coat, from beaten copper to a tight leopard skin to the distinctively deep mottled patterns signifying the arrival of Vorlon Ambassador Kosh and his frustratingly vague prophecies of doom.



Make Them Think Different

You've seen them in bus stops, in your house of worship, and blown up to enormous size on the sides of buildings: those snappy posters that attempt to piggyback our humble little computers onto the fame of personages both legendary (Bob Dylan) and, well, those who are sentimental favorites of the ad people (Joan Baez). You certainly know folks who'd love one or two for their home and office, but you're long past the age when you can just tear bus ads out of their frames.

Well, just call AppleDesigns (800/825-2145), press 2, and ask for your own "Think Different" posters. (By the time you read this, the AppleDesigns catalog should also be online at www.appledesigns.com.) You can buy all of Series Three (Lucy and Desi, Jim Henson, Miles Davis, and Ansel Adams) for \$10. And they're perfect for office gift-giving; they come only in sets, so you'll have one poster as a legitimate gift, one for yourself, and two more to save for when coworkers you've bought nothing for surprise you with presents.

The AppleDesign catalog offers all kinds of other Apple-logoed gifts, including a \$40 "Think Different" watch, which runs backward. (At press time, they were sold out at Apple but still available from mail-order houses.) Sure it's impractical, but you'll use it anyway because it's just too damned cool; needless to say, that makes it a worthy heir to the original 128K Mac and the Newton MessagePad 100.



Transport Them to the 1980s

We're now in that wonderful part of our social history in which an entire generation exists whose cultural touchstones aren't movies or music or cars but rather the video games they used to play as kids. And so today, there can be no more thoughtful gift for anyone between the ages of 25 and 35 than a copy of MacMAME.

MacMAME (available free from www.macmame.org) is an application that emulates the hardware of all the classic coin-op arcade machines. With MacMAME and one of the more than 500 downloadable ROMs of the great games of yore, your Mac reproduces the experience in such detail that you'll swear you can hear the sound of the Thompson Twins playing in the background.

Present your loving wife with a Zip disk of all the games you used to play together while courting in dingy suburban bowling alleys. "Got the humanoid?" you will ask, softly. "Got... the intruder," she will reply, misty-eyed, offering a tender kiss on the cheek.

Help Them Find Their Files

For the practical-minded on your list, Action Files, from Power On Software (\$50; www.actionutilities.com), is the gift that keeps on giving. The people you give it to will love what it does for their Mac, and you'll look like a major ninja stud-monkey power user by buying it for them.

Action Files turbocharges the Mac's Open and Save dialog boxes, adding a menu bar that offers instant access to recently used volumes, folders, and files, and allowing you to perform several Finder actions, such as emptying the Trash and doing a Get Info, from within the dialog box. It also makes the listing wide enough to read whole file names and displays modification dates and the amount of free space left on mounted volumes.

True, Mac OS 8.5 provides similar enhancements—but only in programs modified to support the new Open and Save dialog boxes. That only makes Action Files more desirable: these enhancements are just so great that everyone will want them in *all* of their apps. And that's what Action Files delivers. **m**

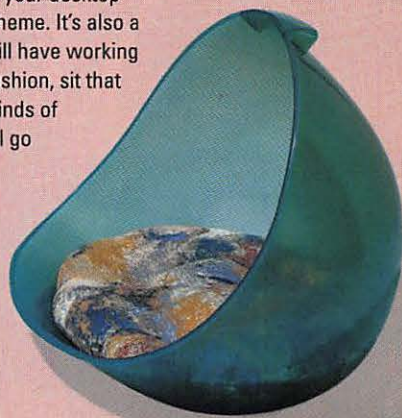
Andy Ihnatko, America's 42nd-most-beloved industry personality, has written about Macs and technology for Macworld, MacUser, Yahoo Internet Life, and Playboy. He is the author of Cyber Speak: An Online Dictionary (Random House, 1997).

Give Them Anything Bondi Blue

Yes, such is the runaway popularity of the iMac that the darling little 40-pound device is having its influence all over the industry, with everyone rushing to buy peripherals that are stylistically compatible with that supertrendy plastic bubble on their desk. And though the precise color of the iMac was exhaustively formulated and researched (can we just *admit* that Bondi Blue is nothing more than the color of the sea plastic in the Battleship board game?), there were already plenty of existing consumer items that now match the iMac decor well and make great gifts for a recent iMac convert.

My personal favorite: the small Critter Corral, from Dorskocil (\$17; Box 1246, Arlington, TX 76004). Make no mistake: one day Steve Jobs was at Debby's Pet World, saw this on display, and thought, "Put a big screen and a G3 in that thing, and I could sell a million of 'em!"

Now your cat can share your desktop without ruining the larger scheme. It's also a boon for those of you who still have working Mac Classics: pull out the cushion, sit that sucker in there, and in the minds of the slightly nearsighted you'll go from being the dregs of the office hardware-requisition backlist to that silver-tongued devil who got his IS department to buy him a \$1,299 computer just for its looks.



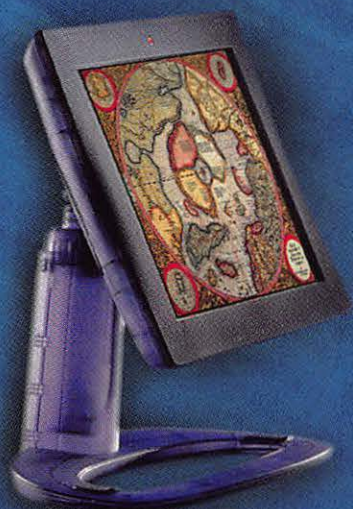
THE WORLD

Macworld Lab Looks at

19 Flat-Panel Displays

That Could Make Your

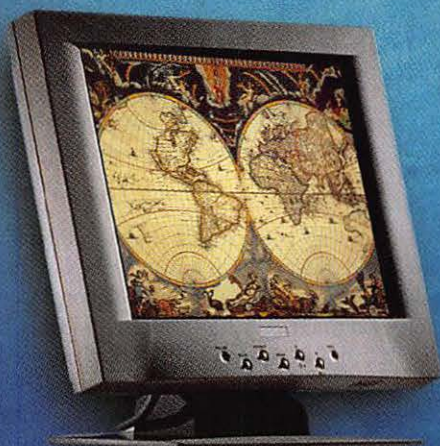
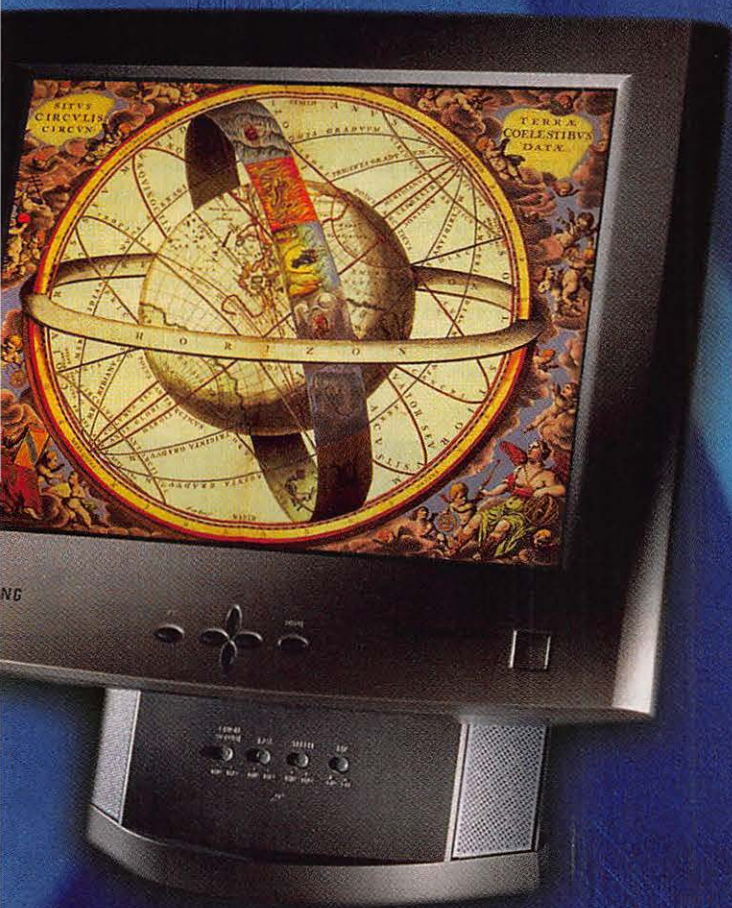
Bulky Monitor a Dinosaur



by JULIE POLITO

You may think you're content as you spend every workday staring into the heavy, flickering glass tube that is your display. But your computing experience is about to radically change—the world is going flat. Flat-panel displays, after several years of being oohed and aahed over, are finally finding their way onto desks en masse. Prices are dropping; screen sizes are growing from a wimpy 13 inches to a grand 22; and picture quality is improving, offering readable text and more-recognizable images.

IS FLAT



In the next few years, don't be surprised to see flat panels replace the hulking cathode-ray-tube (CRT) monitors you see all around you. And for good reason: flat panel monitors use less power, are easier on the eyes, and take up about a third of the room of a typical monitor. Many of the models we review are relatively free from early flat-screen weaknesses. But are flat panels truly not just for PowerBooks anymore? Macworld Lab tested 19 flat panels to find out.

Photograph by
MARK JOHANN

Macworld
LAB TEST

THE WORLD IS FLAT

Overleaf (left to right): the Princeton DPP 500, Apple Studio Display, Samsung SyncMaster 520 TFT, Hitachi PCX-DT3140 (upper right), and Sony CPD-L150.

Small Space Savior

If there's nothing wrong with your current monitor, then it may be hard to imagine why'd you'd chuck it for a new display. To sum it up: space. A typical flat panel with a 15-inch-diagonal viewing area is about 8 inches deep and 15 inches wide by 15 inches high. For 15 inches on a CRT display, the monitor will be 17 inches deep and 18 inches wide by 18 inches high. The worst part? Moving a 40-pound CRT will break your back, whereas a trim, 12-pound flat panel is no problem—two models we looked at even come with clever carrying handles. In the space on your desk where you're keeping that extra bulk, you could keep a scanner or a printer, or even another monitor. In fact, a flat-panel display makes a perfect partner in a dual-monitor setup.

There's another little plus about flat panels that won't be so obvious at first glance if you are used to a CRT—they're easy on the eyes. Standard CRTs constantly refresh the image you see on the screen, creating a persistent flicker. A flat screen, which uses a different kind of technology called *active matrix*, displays a constant image. No flicker equals less eyestrain. Macworld Lab testers, who have conducted hundreds of tests on displays, said their eyes felt less tired after spending days and days in front of the 20 flat panels we analyzed than they would have with CRTs.

However, the traditional CRT *does* still have lots of things going for it: color fidelity and image quality on the best CRTs are clearly better than on the best flat-panel monitors. CRTs have a much larger *viewing angle*—the larger a monitor's viewing angle, the farther you can move from dead center in front of the screen and still see its contents clearly. Although you can view a CRT from extreme angles, LCD screen contents tend to fade out of view even when you can clearly see the front of the monitor itself. And CRTs are still quite a bit cheaper than similarly sized LCD screens.

Tube-Free Viewing What gives a flat-panel display its trim figure? The same thing that illuminates higher-end notebook screens—active-matrix technology, also known as thin-film-transistor (TFT) technology. The transistors in a TFT monitor essentially replace the heavy tube required for CRT monitors—the larger the monitor, the weightier the tube.

Whereas a CRT is basically made up of an electron gun that shoots electron beams at red, green, and blue phosphors inside a tube, an active-matrix display uses red, green, and blue filters in front of liquid crystals. These crystals allow light from a backlight, made of one or more fluorescent tubes, to pass through when electricity from transistors is applied to them. That's why flat-panel monitors are often referred to as LCDs, or liquid-crystal displays.

Inside an active-matrix LCD panel are several thin layers of filters and liquid crystals. Light pushes through each of the layers

FLAT PANELS COMPARED

Company	Product	Mouse Rating	Company's Estimated Price	Phone	Viewable Area (diagonal, in inches)	Maximum Resolution (in pixels)	Dimensions (height × width × depth, in inches/weight)
EDITORS' CHOICE							
Apple Computer	Studio Display	★★★★½	\$1,299 ^B	408/996-1010	15.0	1,024 × 768	19 × 15.5 × 9.3/12 lb.
Compaq Computer	TFT450	★★	\$949	281/370-0670	14.5	1,024 × 768	15 × 14.3 × 8/12.5 lb.
CTX International	PanoView 745	★★★	\$899	626/839-0500	14.0	1,024 × 768	15 × 15 × 7.3/12 lb.
Eizo Nanao	FlexScan L23	★★★	\$1,249	562/431-5011	13.6	1,024 × 768	14.5 × 14 × 6.5/12.8 lb.
EDITORS' CHOICE							
Hitachi America	PCX-DT3140	★★★★	\$1,399	650/589-8300	14.0	1,024 × 768	12.8 × 14.6 × 7.3/7.3 lb.
Mitsubishi Electronics of America	LCD40	★★★★½	\$1,099 ^B	714/220-2500	14.0	1,024 × 768	14 × 11.3 × 6.3/10 lb.
	LCD50	★★★	\$1,499 ^B	714/220-2500	15.0	1,024 × 768	14.5 × 15 × 6.5/11.5 lb.
NEC Technologies	MultiSync LCD400V	★★½	\$1,199	630/467-5000	14.0	1,024 × 768	14 × 13 × 6.5/11 lb.
	MultiSync LCD1510V	★★★★½	\$1,299	630/467-5000	15.0	1,024 × 768	17 × 15 × 7.8/14.8 lb.
	MultiSync LCD1510	★★★★½	\$1,599	630/467-5000	14.9	1,024 × 768	17.5 × 15.8 × 8/14.8 lb.
	MultiSync LCD2000 Special Edition	★★★★½	\$5,999	630/467-5000	20.0	1,152 × 870	19 × 19 × 7.5/22 lb.
	MultiSync LCD2010	★★★★½	\$5,999	630/467-5000	20.0	1,280 × 1,024	22.6 × 19 × 8.6/27.8 lb.
Panasonic Computer Peripheral Company	PanaFlat LC50S	★★★★½	\$1,699	201/348-7000	15.0	1,024 × 768	15.3 × 15 × 8/15.5 lb.
Philips Electronics	Brilliance 151AX	★★★★½	\$799 ^B	770/821-2400	15.0	1,024 × 768	16 × 12.8 × 6.5/11.8 lb.
Princeton Graphics Systems	DPP 500	not rated ^C	\$995 ^B	714/751-8405	14.0	1,024 × 768	15 × 14.5 × 10.3/14 lb.
Samsung Electronics America	SyncMaster 320 TFT	★★★★½	\$794	201/229-4000	13.3	1,024 × 768	15.5 × 14 × 8/16.3 lb.
	SyncMaster 520 TFT	★★★★½	\$1,359	201/229-4000	14.9	1,024 × 768	16.3 × 16 × 7/19.3 lb.
Sceptre Technologies	FT15	★★	\$1,199 ^B	626/369-3698	14.5	1,024 × 768	15.5 × 13.3 × 8/12.8 lb.
Sony Electronics	CPD-L150	★★★★½	\$1,599	408/432-1600	15.0	1,024 × 768	14.3 × 15.5 × 6.5/11.5 lb.
ViewSonic	ViewPanel VP150	★★★	\$1,195	909/869-7976	14.9	1,024 × 768	15.3 × 15 × 7/14.3 lb.

● = yes; ○ = no. ^A The number of dead pixels we found in the single review unit we tested. ^B Manufacturer's suggested retail price. ^C A shipping version of this unit was not available at press time.

at varying degrees of brightness, depending on the electrical jolt.

The brightness, in turn, influences red, green, and blue color filters, giving each crystal a different color. Three different-colored crystals make up one pixel, which the eye sees as a dot of light. Thousands of these dots make up the picture on screen.

Since flat panels rely on low-voltage transistors, rather than high-voltage electron beams, for their jolt, they run cooler than their CRT counterparts and use about one-third the energy. They also produce much less electromagnetic radiation than CRT monitors do, which makes them safer for radiation-conscious environments such as hospitals (or your desk).

Don't Be Passive Active-matrix technology is actually an improvement on *passive matrix*, a technology used in lower-end notebooks. Passive-matrix displays suffer from dramatically subdued color and soft text.

The inferior output of passive matrix comes from its attempt to skimp on electricity. An active-matrix screen boasts one transistor for every liquid crystal, whereas a passive-matrix display tries to get by with one transistor per row of crystals.

Getting the Skinny

Early production models of flat panels suffered from terrible *viewing angles*—meaning that if you moved an inch, the image on your screen would become distorted and unreadable. They didn't produce text very well, either, often displaying fuzzy, bleary characters.

The 19 displays that Macworld Lab tested were not completely free of these problems, but some fared better than others (see the benchmark, "Flat Panels Come of Age," for test results; for a comparison of features, see the table, "Flat Panels Compared"). The picture on one of our Editors' Choice picks, the \$1,399 PCX-DT3140, from Hitachi (www.hitachi.com), is almost indistinguishable from that of a conventional monitor, and the unit has fantastic natural color and almost perfect viewing angles. It is as bright as any CRT's, and color images show no posterization (where color pixels are lost and an image appears flat as on a poster). As for text, a Microsoft Excel spreadsheet filled with letters and numbers in a myriad of sizes, fonts, and styles looked razor-sharp and crisp, with no smearing or bleeding around icons. Our one complaint: 14 inches is small by today's standards.

Movin' On Up Which brings us to a healthy crop of 15-inch displays, led by one from Apple Computer.

Apple's first flat-panel monitor, the \$1,299 Apple Studio Display (www.apple.com), is made of the same stunning translucent plastic as the iMac, only in bluish-purple. It's the only monitor in our roundup that doesn't require a special adapter, unless you are using a computer with a VGA port. In our color-performance tests, which measured a monitor's *color gamut*, or the range of colors a monitor was able to display, the Studio Display scored higher than any other monitor, and in the image-quality tests, the jurors were pleased with its color and detail rendition. It could, however,

Dead Pixels ^A	Auto Reset	Free Mac Adapter	Built-in Speakers	Height Adjustment on Stand	Comments
2	○	●	○	●	Its good looks go far beyond Apple's signature translucent plastic to nice images and decent text.
2	○	○	○	○	Inexpensive, and it shows—its images and text left us squinting.
1	○	○	●	○	This bright monitor is a good bargain, if you don't mind its terrible vertical viewing angle.
0	●	○	●	○	This display has an overall cool color cast, and its vertical viewing angle makes it hard to read what's on the screen.
1	○	○	○	○	The horizontal viewing angle on the CRT-quality Hitachi is so good that we don't recommend it if you have nosy coworkers.
1	●	●	○	○	Sharp text and good color are overshadowed by a distracting shimmering twinkle on this display's screen.
1	●	●	○	○	Not a bad choice for a 15-inch monitor, with decent viewing angles and acceptable image quality.
2	●	●	○	○	One of the worst performers among the 14-inch monitors in this review, this NEC is not a good investment.
0	●	○	○	●	We were impressed with its viewing angles and image quality. If you don't need pivoting, this might be your display.
3	●	○	○	●	The best option if you want a pivoting display in order to look at files in portrait mode.
3	●	●	○	○	A solid performer with decent text and image reproduction—the better of the two big displays, in a stylish black case.
2	●	○	○	●	The image and text quality were fair, but the vertical stripes on-screen make this 20-inch monitor one to avoid.
0	○	○	●	○	A better price tag and improved controls would make this monitor, which has nice color and text overall, one to consider.
1	●	●	●	○	You get what you pay for in this bargain display: bad viewing angles with barely acceptable text and image quality.
0	○	○	●	○	The only flat panel with straight digital connection—no analog translation in the way makes for good images and sharp text.
0	○	●	●	○	The cheapest in our roundup, this monitor is hampered by poor viewing angles and fuzzy text.
0	○	●	●	○	If you can get past the poor viewing angles, the color reproduction and text crispness on this monitor will please.
6	○	○	●	○	When you see this on sale, pass it by. Its poor vertical viewing angle and fuzzy text will only aggravate your eyes.
0	●	●	○	○	The unit we tested was a little warm-toned but impressive overall, with sharp text and great detail on pictures.
2	○	●	○	○	This unit has decent viewing angles and sharp text, but minor color-gradation problems keep us from calling it great.

offer crisper text and a better vertical viewing angle. Its good image quality, stylish design, and Mac-savvy make it our 15-inch Editors' Choice pick, but a few other monitors do have the edge on it in terms of viewing angles and sharpness.

Other top performers in the 15-inch group were the \$1,599 CPD-L150, from Sony Electronics (www.ita.sel.sony.com), and the \$1,599 MultiSync LCD1510, from NEC Technologies (www.nec.com). We liked the Sony because of its good viewing angles. Although not as outstanding as the Hitachi, it still allows for a comfortable range of head motion.

The NEC LCD1510 was the only display in the group that could be pivoted without noticeable image-quality degradation. Pivoting (tilting the monitor from landscape to portrait mode) is easy with these lightweight displays. Other monitors also boasted the ability to operate in a portrait orientation, but the NEC LCD1510 was the only monitor out of the 19 we tested that we

felt could really do it successfully. Most of the monitors didn't work at all when pivoted, due to software conflicts.

Next in Line After the top few performers, display quality drops off considerably. But there are still some standout monitors worth noting, such as Princeton Graphics Systems' \$995 DPP 500. The product we looked at wasn't a shipping version, so we couldn't test it, but we felt that it was important to include because it is the first display of its kind—all digital. Standard CRTs, and most available LCD displays, take an analog video signal from your computer and must synchronize it to display it on the screen. This synchronization is necessary because a CRT monitor is essentially an analog device, but it can degrade image quality.

Due to the prevalence of CRT monitors, today's graphics cards are not equipped to handle a digital-to-digital connection for displays. To solve that problem, ATI Technologies, a

continues



Flat Panels Come of Age

Although amazingly small and light, early flat screens tended to falter in brightness, color reproduction, and viewing angles. Our brightness and color-gamut measurements show that some displays have evolved more than others. In general, the better the color gamut and brightness, the better the flat-panel image looked to the jury that evaluated each monitor for image quality and text clarity. Overall, both vertical and horizontal viewing angles have improved on flat screens, but we found a few displays with viewing angles that were still unacceptable for day-to-day use.

Best results in red.

OBJECTIVE TESTS

SUBJECTIVE EVALUATIONS

	OBJECTIVE TESTS		SUBJECTIVE EVALUATIONS		
	Brightness in Footlamberts	Color Gamut	Horizontal Viewing Angle	Vertical Viewing Angle	Image Quality
14-Inch Monitors					
Eizo FlexScan L23	41	0.077	Excellent	Poor	Excellent
★ Hitachi PCX-DT3140	52	0.073	Excellent	Fair	Excellent
NEC MultiSync LCD400V	44	0.065	Fair	Poor	Poor
Samsung SyncMaster 320 TFT	40	0.070	Poor	Poor	Fair
15-Inch Monitors					
★ Apple Studio Display	31	0.110	Excellent	Poor	Excellent
Compaq TFT450	37	0.074	Excellent	Fair	Poor
CTX PanoView 745	58	0.051	Excellent	Poor	Fair
Mitsubishi LCD40	40	0.092	Fair	Excellent	Fair
Mitsubishi LCD50	46	0.083	Excellent	Fair	Fair
NEC MultiSync LCD1510	34	0.069	Excellent	Excellent	Fair
NEC MultiSync LCD1510V	34	0.068	Excellent	Excellent	Excellent
Panasonic PanaFlat LC50S	47	0.097	Fair	Fair	Fair
Philips Brilliance 151AX	42	0.097	Poor	Poor	Fair
Samsung SyncMaster 520 TFT	40	0.091	Poor	Poor	Excellent
Sceptre FT15	41	0.051	Fair	Poor	Poor
Sony CPD-L150	31	0.073	Excellent	Fair	Excellent
ViewSonic ViewPanel VP150	32	0.092	Fair	Fair	Fair
20-Inch+ Monitors					
NEC MultiSync LCD2010	45	0.080	Excellent	Poor	Fair
NEC MultiSync LCD2000 Special Edition	32	0.082	Excellent	Excellent	Fair

★ = EDITORS' CHOICE

Longer bars are better.

Behind Our Tests

Macworld Lab conducted objective tests with a Minolta CA-110 color analyzer. All monitors were tested at their highest resolution at 65Hz. Brightness is in footlamberts and represents the monitor's default setting. Color gamut is measured against the range of possible colors the human eye can see, using a specialized index. During testing we used each monitor's default setting. We gauged degrees of viewing angle by adjusting each

panel in both dimensions and noting color dropout, color shift, and text visibility. Macworld Lab also conducted subjective tests, comparing each monitor with a Radius PressView 17SR. Image quality was determined by a jury of three people, who assigned a score for each monitor according to how well it displayed our test images in Microsoft Excel and Adobe Photoshop.—Macworld Lab testing supervised by Jeffy Milstead

imagine an association totally devoted to adobe photoshop



If you want to learn the hottest techniques, the coolest special effects, and the inside tips that can cut your production time in half, then you've got to join the **National Association of Photoshop Professionals (NAPP)**. NAPP was formed with one goal in mind: to give its members the edge when it comes to Adobe Photoshop. When you join NAPP you'll enjoy advantages only available to members, like:

- **Below mail-order discount prices** on hundreds of Photoshop-related products, Photoshop upgrades, (even hardware) specially arranged just for NAPP members. (Including anything you buy from MacWarehouse). Members also receive significant discounts on **Photoshop seminars, training videos, and books**. Plus special "killer dealz" on specific software and hardware products at the lowest prices offered anywhere.
- You'll learn all the inside secrets with your free subscription to **Photoshop User magazine**—the *only* magazine covering Photoshop exclusively. Each issue teaches you the coolest tips, timesaving shortcuts, how to create those eye-popping effects, how to avoid common mistakes, plus all the latest news and reviews. It's the ultimate "how-to" magazine you'll refer to again and again. There's never been a magazine like it! (Note: Subscriptions to *Photoshop User* are *not* available to the public, only NAPP members get this invaluable resource mailed to them free!)
- You'll always be "in the know" with exclusive access to the **members-only NAPP Website**. It's the #1 resource on the Web for Photoshop news, plug-in and Action downloads, tips and techniques, online member gallery, job bank, online Photoshop book store, and much more.
- If you've got a Photoshop question, and don't know where to turn, now you'll have a resource to get the answers fast with **NAPP's online 24-hour Photoshop Help Desk**.
- You'll expand your knowledge and network with other Photoshop users from around the world at **NAPP's Annual Conference**. This is where NAPP members come together to get the latest training, share their ideas, solutions, and make important new contacts.
- You'll **enhance your professional image** by using the NAPP logo on your letterhead, business cards, Website, and collateral materials. Plus you get a NAPP membership card, full-color Window sticker, and much more.

Any Photoshop user, at any level, can join NAPP and membership is ideal for graphic designers, photographers, Web designers, service bureaus, print shops, ad agencies, desktop publishers, hobbyists, educators, and anyone who realizes that there's more to learn about Photoshop than there is time to learn. Join the thousands of people who have already made NAPP an important part of their Photoshop success, and we'll rush you your member kit which includes the latest issue of *Photoshop User*.

**A one-year membership is only \$99.
Join Today! Call 800-738-8513**

or join online at www.photoshopuser.com
Corporate, Educational, and International memberships also available.

For more info visit www.photoshopuser.com

Photoshop is a registered trademark of Adobe Systems, Inc. Images courtesy of Rubberball.



NATIONAL ASSOCIATION
NAPP
OF PHOTOSHOP PROFESSIONALS

graphics-card maker, developed a new digital-to-digital standard for flat-panel monitors. The Princeton DPP 500 is the only monitor in our roundup that uses it. It requires a special PCI card, an add-on graphics card that does the digital-to-digital transfer, so you'll need to have a free slot. The DPP 500 was comparable to the rest of the top flat panels in image quality and especially sharp in text reproduction.

Bargain Hunting We like a good deal as much as the next person, but there are a few flat panels in this roundup we'd simply recommend you avoid, even if the price is right.

Like the putrid-orange sweater you bought for \$15 because it was cashmere, the wacky color on the \$949 TFT450 flat-panel display, from Compaq (www.compaq.com), will prompt you to relegate it to a closet. Its poor viewing angle makes reading the screen a dreaded chore. Similarly weak is the FT15, from Sceptre (www.sceptre.com). At \$1,199, it isn't even cheap.

If you want a flat-panel display that is cheap but tolerable, go for the \$899 PanoView 745, from CTX International (www.ctxintl.com). Even though its vertical viewing angle isn't laudable, the color and text aren't bad.

The Gamble

Of course, flat panels have their faults. Prices are dropping, but you still pay as much for a 15-inch flat panel as for a 21-inch CRT monitor.

Also, a flat panel won't solve all your display dilemmas. For instance, one problem in CRTs and flat panels is dimming light sources. After a few years, the light sources in both begin to lose their brightness, making the images on your screen appear faded. The best solution for dimming bulbs? Buy a new monitor.

Flat-panel displays are subject to dead pixels, which show up as dots on the screen. A dead pixel is a liquid crystal that doesn't bend to accommodate the light needed to produce an image. All but 7 of the 20 monitors we looked at had at least one dead pixel when we got it out of the box.

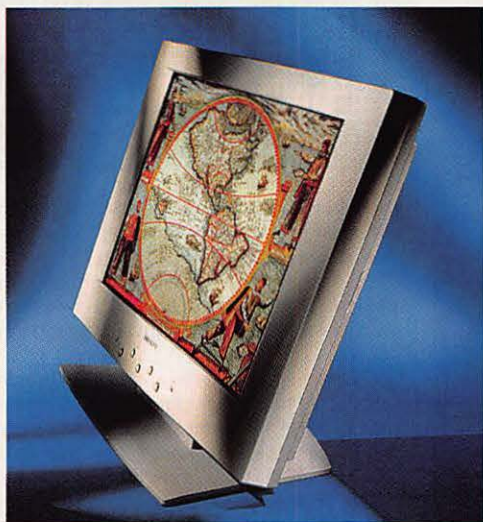
If you need higher-than-average resolution, then flat panels will disappoint. Most flat panels top out at 1,024 by 768 pixels, although NEC's 20-inch panels go up to 1,152 by 870 and 1,280 by 1,024 pixels.

Except for the Apple Studio Display, all the flat panels we looked at need a special adapter for use with the Mac. Although about half have their own adapter, you can buy one for about \$15.

View from Tomorrow

The future of flat panels isn't all about liquid-crystal displays. Even while newer flat-panel models, such as the Princeton DPP 550, are changing from an analog to an all-digital format, display companies are working to develop other types of technology.

One new display technology on the rise is plasma. In this approach, cells made up of red, green, and blue phosphors are encased in a layer of gas. Electrical energy is used to excite the gases, which in turn trigger the cells to emit colored light. The



Nothin' Flat Hitachi's PCX-DT3140 is a 14-inch monitor with CRT-like image quality.

color depends on the intensity of the electrical signal. Today this technology is used only in large displays.

Another up-and-coming display option is light-emitting-polymer, or LEP, technology. LEP uses a thin layer of plastic film that has the potential to create a flat screen as thin as paper.

As plasma and light-emitting-polymer technologies become viable, flat-panel prices and quality should improve.

Macworld's Buying Advice

If you thought flat-panel monitors were the stuff of science fiction, think again. After testing 19 slim displays, we've determined that if the time has come to buy a new monitor, it isn't jumping the gun to consider an LCD.

We discovered that some LCD attempts from manufacturers are best avoided because their poor viewing angles, blurry text, and lifeless color quality will leave you begging for a CRT. But in this collection of thin displays, there are also a few standouts that boast as-good-as-CRT crispness with text and numbers as well as true-to-life color and superior horizontal and vertical viewing angles.

Is it time to make your world flat? Not if you need a large display with no compromises. But if space is an issue and you're ready to take the plunge for a new or second monitor, it's time to take a look at flat panels. **m**

Display specialist JULIE POLITO is a San Francisco-area journalist who writes about technology.

EDITORS' CHOICE

14-Inch Display

★★★★ Hitachi PCX-DT3140 This flat panel made believers out of the LCD skeptics at Macworld. Although it's on the small side at 14 inches, no other display compared. You'd never know from looking at this monitor that problems like poor viewing angles and bleary, fuzzy, unreadable characters are common among LCD displays—it rivals the best CRTs. **Company:** Hitachi America (650/589-8300, www.hitachi.com). **Company's estimated price:** \$1,399.

15-Inch Display


★★★★½ Apple Studio Display Although not as impressive as the Hitachi display, Apple's first flat-panel monitor is tops in terms of color performance, scored high in image-quality tests, and doesn't require a VGA-to-Mac adapter. And lest we forget, its sleek blue-plastic exterior takes it off the scale in terms of design. **Company:** Apple Computer (408/996-1010, www.apple.com). **Company's estimated price:** \$1,299.

REAL PRODUCTS REAL RATINGS

Reviews you can trust Macworld rates only final shipping products, not prototypes. What we review is what you can actually buy.



Lode Runner 2

You can run, but you can't hide. Trying to stay one step ahead of the game. Sprinting through an ever-changing 3D maze of twisted paths. Hunted by hooded foes at every turn. Pushing the limits of gaming stamina. Lode Runner 2—easy to play, impossible to master. Prepare for cerebral overload!



Mind-bending 8-player multiplayer mode!

FROM THE DEVELOPERS OF THE BEST-SELLING PUZZLE GAME, LODE RUNNER.



150 levels spanning 5 weird worlds!

Customize your own insane levels or build one from scratch!

NEED A HINT? 1-900-CALL-26T

(229-2714)

(95¢ per minute; 5¢/min for fax back signal) Must be 18 years or older or have parents permission to call. Touch tone phones only.

800-229-2714

Call for a free catalog or visit our website:
www.wizworks.com/macsoft
or visit the GT Interactive online store:
<http://store.gtinteractive.com>



Lode Runner II ©1996, 1998 Presage Software Development Company. All rights reserved. Lode Runner is a registered trademark owned by Douglas E. Smith and is exclusively licensed. Copyright © 1993 Douglas E. Smith. Presage and the eye logo are registered trademarks of Presage Software Development Company. Published and Distributed by MacSoft, an affiliate of GT Interactive Software Corp. All other trademarks are the property of their respective companies.

MacSoft®

An affiliate of GT Interactive Software Corp.
2300 Berkshire Lane No., Plymouth, MN 55441

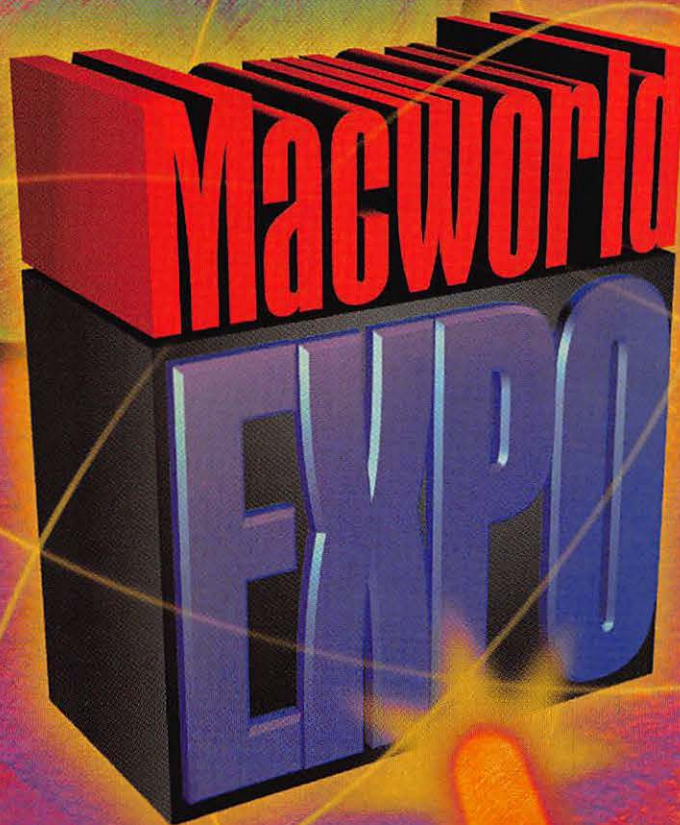
Choose 30 at www.macworld.com/getinfo

MOSCONE CONVENTION CENTER • MARRIOTT HOTEL

SAN FRANCISCO

JANUARY 4-8, 1999

THE HERE AND FUTURE NOW



Sponsored by:

Macworld

Owned & Produced by:

IDG
WORLD EXPO

Managed by:

IDG
EXPO MANAGEMENT
COMPANY

FOR A FULL EXHIBITOR LIST, UP-TO-THE MINUTE INFORMATION,
OR TO REGISTER, CALL **(800) 645-EXPO** OR VISIT:

www.macworldexpo.com

You've seen the reports from Silicon Valley to Wall Street—with increasing support from developers, vendors, and committed third parties.

For millions of computer users, Macintosh is synonymous with increased productivity and innovative technology advances. Come to San Francisco—home to a “think different” community—for the latest technologies and trends that will change the way you work, play, and learn now, and in the future.

At MACWORLD Expo/San Francisco, you'll demo, touch, see, and feel all the hot new products from over 400 leading vendors. Buy right on the show floor and enjoy show specials! Products and services centered around the iMac, PowerBook G3's, PowerMac G3 Desktops, QuickTime™ and much more! Learn time-saving productivity secrets through in-depth workshops and advanced and user-level conference programs. Hear from the brightest stars who are reshaping the future of the Mac universe at the much-anticipated keynote address.

YOU ARE INVITED TO ATTEND THE PREMIER EVENT FOR:

- the Internet
- digital content creation, management, and delivery
- multimedia
- software development
- small business
- remote worker programs
- connectivity
- graphic design
- publishing
- education, research, and development
- home computing
- gaming
- entertainment
- new media professionals

In today's fast changing “wired world,” it's a fact of life — Macintosh users lead the way into the creative markets, schools and the home while the others follow. Come to MACWORLD Expo/San Francisco to see what technologies, strategies and solutions the rest of the world will soon be using.

MACWORLD Expo/San Francisco is the largest Mac-focused event where you can see all the industry's leading vendors and latest innovations. There is no better opportunity to see, hear and learn so many ways to improve your productivity, business results and home computing experience. Look at all you can do at MACWORLD Expo/San Francisco:

- *The Mac OS is back! See the growing list of vendors supporting the industry's hottest new products and technologies. See, feel, and demo the latest products so you can make informed purchasing decisions about your Mac investments.*
- *With the successful introduction of the iMac and PowerMac G3's, new products are coming to the market at an unprecedented pace. Buy these products right on the show floor— at a discounted price!*
- *Enhance and update your creative skills, concepts and strategies by attending any of the dozens of conferences and workshops developed specifically for the individual needs of both Mac professionals and consumers. Grow your business and enhance your Mac experience!*
- *Hear the very latest news and industry buzz before it hits the streets by attending our keynote sessions and conferences.*
- *Network with other Mac professionals to share ideas and insights on getting the most from the iMac and other high-performance G3 products.*

- **TOWN MEETING:**
January 4, 1999
- **PRE-CONFERENCE WORKSHOPS:**
January 4, 1999
- **KEYNOTE ADDRESS:**
January 5, 1999
- **EXHIBITS:**
January 5-8, 1999
- **Macworld/Pro CONFERENCE:**
January 5-7, 1999
- **MACWORLD EXPO USERS CONFERENCE:**
January 6-8, 1999

REGISTER BY DECEMBER 4 AND SAVE!

SAVE \$100 ON PACKAGE 1:

Full Package (ALL Macworld/Pro and MACWORLD Expo Users Conference Sessions)

SAVE \$100 ON PACKAGE 2:

Pre-Conference Workshop & All Macworld/Pro Conference Sessions

SAVE \$100 ON PACKAGE 3:

All Macworld/Pro Conference Sessions

SAVE \$50 ON PACKAGE 4:

MACWORLD Expo Users Conference Sessions & Pre-Conference Workshop

SAVE \$25 ON PACKAGE 5:

All MACWORLD Expo Users Conference Sessions

SAVE \$50 ON PACKAGE 6:

Pre-Conference Workshop

SAVE \$16 ON PACKAGE 7:

MACWORLD Expo Exhibits

All packages include admission to the exhibit floor. Please refer to the registration page for complete package descriptions.

TAKE ADVANTAGE OF THESE SAVINGS!

**COMPLETE AND RETURN THE
REGISTRATION FORM TODAY!**

Or go to:
www.macworldexpo.com
to register.

more ▶

Industry Leaders Speak Out!

KEYNOTE ADDRESS:

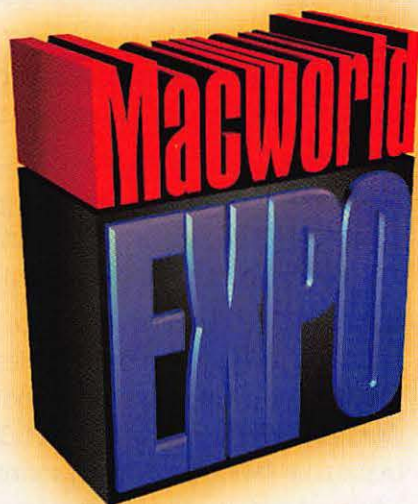
The Macintosh industry is one of the most exciting and fast-moving places to be these days. What are the trends that will shape the industry in the year ahead? What are the technologies to keep an eye on? Hear the insights and predictions of the people who are moving the industry forward at the MACWORLD Expo keynote address. MACWORLD Expo is traditionally the place where the news is made—don't miss this opportunity to hear it first!

Tuesday, January 5, 9:00 a.m. - 10:00 a.m. at the Marriott Hotel

TOWN MEETING:

MACWORLD Expo Conference attendees are invited to attend this opening session of MACWORLD Expo/San Francisco. Hosted by conference chairperson Paul Kent and Mac industry stalwart Bob LeVitus; come and hear experts from all corners of the Mac community speak on a variety of subjects. The MACWORLD Expo Town Meeting features lectures, debates, performance, cool demos and interactive discussions.

Monday, January 4, 9:00 a.m. - 11:30 a.m.



PRE-CONFERENCE WORKSHOPS

**Monday, January 4, 1999:
12:00 p.m. - 7:00 p.m.**

Make the most of your time at MACWORLD Expo/San Francisco. Take advantage of this unique opportunity to spend an entire day getting in-depth training before the conferences and exhibits begin. Full workshop session descriptions are posted on the Web at: www.macworldexpo.com.

- [WA]** Practical Introduction to Mac Networking
- [WB]** Designing Web Pages with Dynamic HTML
- [WC]** Desktop Publishing: The Big Picture
- [WD]** Creation of High Quality Photographic Web Content
- [WE]** Essentials of Web Publishing
- [WF]** Putting Internet Commerce to Work
- [WG]** Optimizing AppleShare IP in the Integrated Network Environment
- [WH]** Macintosh Network Administration with the Apple Network Administrators Toolkit
- [WI]** Introduction to Content Asset Management
- [WJ]** Workflow Automation with AppleScript

Special Interest Environments

ON THE MACWORLD EXPO EXHIBIT FLOOR

January 5-8, 1999

EDUCATION DISTRICT

The newly expanded Education District will showcase software, Internet tools, curriculum building solutions and multimedia for schools, training and home learning. Bursting with new applications, hardware, and real-world solutions from leading developers and solutions providers, the Education District will bring you new ways to enhance classroom learning.

APPLE DEVELOPER CENTRAL

Come see the latest applications, custom solutions, multimedia, scientific and engineering solutions for the Macintosh. Annually Developer Central is one of the very best resource centers where software developers can find the tools and solutions they need to grow their companies and reduce development time and costs.

CONSUMER APPLICATIONS AT HOME

Consumer Applications at Home will be the premier showcase for digital entertainment and consumer applications created for home use. Supported by Apple Computer, this exciting area will deliver hands-on demonstrations, solutions, and real-life business models for consumer applications, appliances and entertainment content.

EXTENSIONS WORKSHOP FOR CREATIVE CONTENT

The Extensions Workshop is the showcase for the most popular desktop publishing, multimedia and pre-press applications. Its bound to be a major attraction at MACWORLD Expo! Join the World-Wide Power Company and XChange NA in demonstrating and reviewing cutting-edge extensions designed to help you create and publish compelling content.

MACINTOSH GAMING CHAMPIONSHIP & EXHIBITIONS

Showcasing the latest gaming titles and environments for the iMac and other Mac products, the Macintosh Gaming Exhibitions is a high-energy interactive area to get your hands-on today's hottest games. Featuring the ultra-successful National Macintosh Gaming Championship and retail store, you will have the opportunity to demonstrate, compete, and buy the latest Mac game titles.

Check out www.macworldexpo.com regularly for updates and announcements about other new special attractions on the MACWORLD Expo show floor, including areas dedicated to QuickTime™, Internet server and application development tools, video streaming and content asset management.

THE CONFERENCE PROGRAM

Macworld/Pro Conference • MACWORLD Expo Users Conference

Macworld/Pro

The Technical Conference for Macintosh Professionals

January 5 - 7, 1999

Get in-depth, advanced technical training at MACWORLD Expo by participating in the Macworld/Pro Conference. Improve your skills, meet other Mac professionals with similar challenges and stay on top of your profession. The Macworld/Pro Conference is designed for:

- Webmasters, Content Creators, Web Entrepreneurs, Web Developers
- Network Managers, Network Administrators
- Support Professionals
- Developers
- Mac Platform Managers from Business, Government and Education
- IS/IT/MIS Managers
- Educators

Participate in these sessions led by a faculty of world-class instructors and lecturers and take your computing efforts to the next level. You'll emerge from this conference with enhanced skills and a wealth of new information. Here's what you can expect.

Macintosh Networking & Communications

This track presents techniques and technologies associated with deploying Macintosh LANs, WANs, Internet/Intranets and remote access. These technical sessions take you inside the protocols and services you will encounter when using Macs on a network.

Sessions Include:

- Open Transport Update – the Macs on TCP/IP Report
- Tuning Open Transport
- On the Trail of Network Problems
- High Speed Connection Alternatives – Which is Best for You?
- Building a Mac-Centric Intranet
- ... and more

Creative Track 1

This track hosts several theme days of education for creative professionals. "PDF Day" goes inside the world of the Portable Document Format and reveals how you can mass distribute documents to users and ensure consistent viewability. "Managing New Media Businesses Day" offers sage advice and practical tips for competing in

the hot new media creative world. "Publishing Automation Day" offers 3 solution filled sessions for optimizing publishing workflow processes to save you time and money.

Sessions Include:

- Introduction to PDF
- PDF in the Real World
- Color Management: Digital Proofing
- Pub Auto: Working in RGB
- Pub Auto: Taking Content In-House
- ... and more!

Creative Track 2

The second Creative Track features full days of courses for professional Webmasters, Digital Video and Broadcast pros, and some fascinating and informative sessions about Content Asset Management. Attend these sessions and you will go inside these hot areas and discover new means to enhance your skills.

Sessions Include:

- Web Day: Understanding and Applying XML
- Web Day: Top 20 Tips for Webmasters
- Video Day: Producing Interactive TV for WebTV
- Video Day: Production for Digital Broadcast
- Content Management: Web-Based Content Management
- ... and more!

Creative Track 3

Creative Track 3 offers a comprehensive curriculum of Color Management courses. Learn how to insure color from source through delivery in these hot, timely and cutting edge sessions. The track is rounded out with a series of practical sessions on Pre-Flighting, Web Audio and QuickTime™ that will provide excellent advice on these ground breaking technologies.

Sessions Include:

- Color Management: ColorSync Workflow
- Color Management: Deploying Color Servers
- Create Biz: Issues in Running a Web Design Agency
- Pre-flighting or How to Save \$400 at the Service Bureau
- Delivering Audio on the WWW
- ... and more!

Managing the Mac Platform

The Macintosh continues to be a platform in transition. Environments that deploy Mac OS and related technologies are being forced to evolve along with the platform. It is now more critical than ever to approach Mac systems management methodically no matter what size your organization.

Sessions Include:

- Managing Your Hardware Assets
- Software License Compliance
- Backup Planning and Disaster Recovery
- Planning the Next Generation Mac
- Technical Overview of USB
- ... and more!

MACWORLD Expo Users Conference

January 6 - 8, 1999

Learn from the professionals about how to use your Mac at work, at home, at school and on the road by participating in this conference program.

Maxing Your Mac

Put your Macintosh in full throttle and squeeze every bit of performance out of it. Whether you're working with an old Mac or the latest fully loaded model, you'll get a lot of sound advice and useful tips from experts.

Sessions Include:

- Connect your New iMac to Your Old Stuff
- Fabulous Powerbook Speedups
- How to Get the Most from Your iMac
- Mysteries of the System Folder Revealed – Part I & II
- Troubleshooting - Unlikely Solutions
- ... and more!

The MACWORLD Expo Gallery

Creative people have always chosen the Macintosh as the best tool for turning their vision into reality. This track features renown artists from around the Mac community demonstrating their dazzling works and explaining how they used Mac-based tools to achieve their stunning success. See why the Macintosh is still the premiere environment for bringing creative ideas to life.

Sessions Include:

- 3D Techniques
- Making Beautiful Music: The Macintosh Musician
- Ho-Hum to WOW in 60 Seconds Flat
- How'd they do that (with Adobe Illustrator!)
- Creative Macintosh Layout Techniques
- ... and more!

Crash Courses

Need to get the scoop on the latest technology? Want to get up to speed with the hottest tools? Attend our Crash Courses for a quick hit of technology explanations to help make you a more informed Macintosh user.

Sessions Include:

- Getting Started with Digital Photography
- Getting Setup for the Internet
- Other Uses on the Mac
- Your First Web Page
- How the Internet Works
- ... and more!

more ►

FOR A COMPLETE EXHIBITOR LIST, UP-TO-THE MINUTE INFORMATION,

OR TO REGISTER, CALL (800) 645-EXPO

OR VISIT:

www.macworldexpo.com

THE CONFERENCE PROGRAM

Macworld/Pro Conference • MACWORLD Expo Users Conference

Top Tools

Extend your mastery of a variety of Mac tools by attending these power-user sessions. Whether you're wondering how to get more out of the tools you use every day or learn what a new tool can do for you, these sessions will unlock the secrets of your favorite programs and get you up to speed quickly with advanced features you didn't know were available.

Sessions Include:

- Advanced Filemaker Techniques
- Just Flash It!
- Better HTML
- Hot Quark Tips and Tricks
- Digital Wizardry with Photoshop
- ... and more!

Apple Technology Tutorials

Inside your Macintosh are some of the most advanced and innovative system technologies available on any computer platform. Gain in-depth understanding of these technologies, learn why they're special.

Sessions Include:

- Introduction to QuickTime™ 3.0
- Understanding ColorSync
- Secrets of AppleScript Wizard
- Mac OS Update
- Setting Up a LAN with AppleShare IP
- ... and more!

Center Stage

We've invited some of the luminaries from the Mac community to share their visions, educate, entertain and enlighten you in these sessions. On Center Stage you'll gain new perspectives from some of the most progressive thinkers in our industry.

Sessions Include:

- How to Be a Mac Power User
- Renegade Publishing
- How to Ruin the Internet
- Delivering on the Promise of the Web: Making Everyone a Desktop Publisher
- ... and more!

Small Office/Home Office (SOHO)

It's never been easier or more fun to use Macintosh technology to launch and operate a small company, home-based business or to telecommute from your home office. Learn from experts how to put technology to work for you painlessly to create a lean, mean business machine.

Sessions Include:

- Putting Your Small Business on the Web
- Be a Mac Office—Even if Your Clients are on Windows!
- Telecommuting Essentials
- Small Business Intranet Instruction Kit: Part I and II
- Macintosh Telephony for Small Business
- ... and more!

For Educators Only

The Macintosh paradigm for computing ease-of-use has made it the platform of choice for educators world-wide. This track showcases innovative applications and techniques that can enhance both learning and teaching opportunities in your school.

Sessions Include:

- A Taste of Apple Staff Development
- Practical uses of QuickTime™ in Education
- ... and more!

Macworld Magazine Presents

Macworld's editors, columnists and featured guest speakers present the hottest topics straight off the pages of the industry's premier publication.

Sessions Include:

- Macworld Magazine's Presents Vision Thing Live
- Macworld Magazine's Presents Newsmakers... A Candid Discussion
- Macworld Magazine's Best of Show
- Ask the Experts
- The Game Hall of Fame
- The Best of Macworld Magazine's Mac Secrets
- ... and more!

Goodies

These light-hearted sessions are just for fun! Come join fellow members of the Macintosh user community as we celebrate technology in this wild, weird and wonderful track.

Sessions Include:

- Better Living Through Home Electronics – Gadgets
- Palm Pilot & Macintosh – A Match Synched in Heaven
- The Game Gurus
- Home Networking for the Two Computer Family
- Sports on the Internet
- ... and more!

Travel Made Easy & Convenient!

Travel to MACWORLD Expo/San Francisco Made Easy and Convenient!

Early booking is strongly advised to ensure best hotel selection. Hotel reservations will be assigned on a first-come first-served basis based on availability. Rates shown are per night, per room, and do not include room tax, currently 14% San Francisco occupancy tax. After December 1, 1998 the convention rate may not apply.

Air Reservations: Exclusive discounted fares are available to San Francisco, San Jose and Oakland airports via United Airlines and Delta. A MACWORLD Expo travel professional can assist you with access to these fares or you may contact the airlines directly utilizing the MACWORLD Expo discount numbers below. Additionally, your travel agent may utilize these discount numbers and receive the same low fares.

UNITED: (800) 521-4041 #525XR

DELTA: (800) 241-6760 #DMN119486A

Responsibility and Liability:

Convention Housing Management (CHM) and IDG Expo Management Company, travel program sponsor, and/or their agents act only in the capacity of agents for customers in all matters pertaining to hotel accommodations and transportation whether railroad, motor car, airplane, or any other means, and as such are not responsible for any damage, expense or change in schedule or condition from any loss, injury or damage to any person or property from any cause whatsoever. Baggage handling throughout the program is entirely at the owner's risk. The customer agrees that IDG Expo Management/CHM shall not be held responsible in the event of any errors or omissions in any promotional material.

Convention
HOUSING
Management

Please contact:

**Convention Housing Management
for travel inquiries:**

**1700 The Alameda, 2nd Floor,
San Jose, CA 95126.**

**Telephone: (800) 799-9914
within the United States or
(408) 918-4200 outside of
the United States.**

Fax: (408) 918-4250

Email: macworld@chmrooms.com.

www.macworldexpo.com

MACWORLD EXPO / SAN FRANCISCO ADVANCE REGISTRATION FORM

1. REGISTRATION SELECTION AND FEES

(SELECT ONE ONLY)

DEADLINE FOR SAVINGS IS DECEMBER 4!

All Conference and Keynote Sessions are on a first-come, first-served basis, with the exception of the Pre-Conference Workshops. Please choose your package and fill out the form completely. Incomplete forms will be returned. Please use one form per person; make photocopies for additional people.

Early Discount Registration
on or before 12/4/98 via
phone, www, fax or mail

Regular Registration
(12/5/98-12/30/98)
via phone, www or on-site

☐ Package 1 - SUPER PASS (Jan. 4-8)

Includes: Pre-Conference Workshops • Lunch (Mon. only) • Keynote Presentation • Macworld/Pro Conference Sessions • MACWORLD Expo Users Conference Sessions • Exhibits • Town Meeting

\$895

\$995

W (Write in your Workshop selection code—see list on page 3 of ad. Forms without workshop selection will be returned.)

☐ Package 2 - Macworld/Pro and Pre-Conference Workshop (Jan. 4-7)

Includes: Pre-Conference Workshop • Lunch (Mon. only) • Keynote Presentation • Macworld/Pro Conference Sessions • Exhibits • Town Meeting

\$795

\$895

W (Write in your Workshop selection code—see list on page 3 of ad. Forms without workshop selection will be returned.)

☐ Package 3 - Macworld/Pro Conference (Jan. 5-7)

Includes: Macworld/Pro Conference Sessions • Keynote Presentation • Exhibits • Town Meeting

\$595

\$695

☐ Package 4 - MACWORLD Expo Users Conference and Pre-Conference Workshop (Jan. 4-8)

Includes: Pre-Conference Workshop • MACWORLD Expo Users Conference Sessions • Lunch (Mon. only) • Keynote Presentation • Exhibits • Town Meeting

\$395

\$445

W (Write in your Workshop selection code—see list on page 3 of ad. Forms without workshop selection will be returned.)

☐ Package 5 - MACWORLD Expo Users Conference (Jan. 6-8)

Includes: MACWORLD Expo Users Conference Sessions • Keynote Presentation • Exhibits • Town Meeting

\$170

\$195

☐ Package 6 - Full-Day Pre-Conference Workshop (Jan. 4)

Includes: Pre-Conference Workshop • Lunch (Mon. only) • Keynote Presentation • Exhibits • Town Meeting

\$295

\$345

W (Write in your Workshop selection code—see list on page 3 of ad. Forms without workshop selection will be returned.)

☐ Package 7 - Exhibits ONLY (Jan. 5-8)

Includes: Admission to the Exhibits ONLY. Does not include admission to the Keynote Presentation or Town Meeting

\$29

\$45

2. CUSTOMER INFORMATION

First Name															M.I.					Last Name														
Title																																		
Company																																		
Street Address (please include apt. #, suite, mail stop, etc.)																																		
P.O. Box (if applicable)																																		
City															State/Province										Zip Code/Postal Code									
Country															Telephone										Extension									
Fax															Internet/E-mail Address																			

3. ATTENDEE PROFILE

MUST BE FILLED OUT TO PROCESS YOUR BADGE.

WHAT IS YOUR INDUSTRY? (CHECK ONE ONLY)

- ☐ 1. Accounting/Finance
- ☐ 2. Aerospace
- ☐ 3. Architecture/Construction/Process Industries
- ☐ 4. Art/Design/Creative Services
- ☐ 5. Arts & Entertainment
- ☐ 6. Computer Reseller/VAR/VAD/Service
- ☐ 7. Consulting
- ☐ 8. Education: K-12
- ☐ 9. Education: Higher Ed
- ☐ 10. Education: Other
- ☐ 11. Engineering/R&D
- ☐ 12. Government/Military
- ☐ 13. Health/Medical Services
- ☐ 14. Legal Services
- ☐ 15. Manufacturing (Computer Industry)
- ☐ 16. Manufacturing (Non-Computer Industry)
- ☐ 17. Marketing Sales/PR/Communications

- ☐ 18. Printing/Publishing
- ☐ 19. Transportation
- ☐ 20. Utilities
- ☐ 21. Other

FOR WHAT PURPOSE ARE YOU PURCHASING/EVALUATING PRODUCTS AND SERVICES?

- ☐ 22. For My Company/Organization/Department
- ☐ 23. For Myself as Consultant/Sole Proprietor
- ☐ 24. For Myself as Consumer

WHAT IS YOUR JOB FUNCTION? (Check One Only)

- ☐ 25. Art Director/Graphics
- ☐ 26. Consultant
- ☐ 27. Controller/Treasurer/Accounting/CFO
- ☐ 28. Corporate Executive
- ☐ 29. DP/IS Management/CIO
- ☐ 30. Editorial/Writing

- ☐ 31. Educator
- ☐ 32. Engineering/Scientific/R&D
- ☐ 33. Human Resources
- ☐ 34. Management/Department Head
- ☐ 35. Marketing/Sales
- ☐ 36. Network Management
- ☐ 37. Professional (Lawyer, Doctor, etc.)
- ☐ 38. Programming/Analysis
- ☐ 39. Purchasing
- ☐ 40. Software Developer
- ☐ 41. Training
- ☐ 42. Other

WHAT IS THE SIZE OF YOUR ORGANIZATION?

- ☐ 43. Under 50
- ☐ 44. 50-99
- ☐ 45. 100-499
- ☐ 46. 500-999
- ☐ 47. 1000 & Over

WHICH PERSONAL COMPUTERS DO YOU USE?

(Check all that apply)

- ☐ 48. Macintosh Powerbook Series
- ☐ 49. Macintosh Performa Series
- ☐ 50. Macintosh Quadra Series
- ☐ 51. Macintosh Workgroup Series
- ☐ 52. PowerMac
- ☐ 53. iMac
- ☐ 54. PowerMac G3
- ☐ 55. PowerBook G3
- ☐ 56. IBM PC or compatible desktop
- ☐ 57. IBM Laptop/Notebook
- ☐ 58. Other

ARE THE COMPUTERS AT YOUR ORGANIZATION NETWORKED?

- ☐ 59. Yes
- ☐ 60. No

4. PAYMENT METHOD

(YOU'LL BE CHARGED FOR ALL REGISTRATIONS RECEIVED INCLUDING DUPLICATES.)

Payment must accompany form for registration to be complete. **DON'T PAY TWICE FOR THIS EVENT!** You will be charged for all registrations received, and will not be refunded for duplicate registrations. Please use one method of registration only.

☐ Check enclosed (make payable to MACWORLD Expo). Enclose check and form in an envelope.

☐ Master Card

☐ Visa

☐ American Express

Amount \$

Account Number

Expiration Date

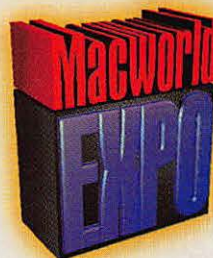
If card holder is other than registrant, please print card holder's name below:

First Name

M.I.

Last Name

Card Holder Signature



**Moscone Convention Center
SAN FRANCISCO**

- Pre-Conference Workshop: Jan. 4
- Town Meeting: Jan. 4
- Keynote: Jan. 5
- Macworld/Pro Conference: Jan. 5-7
- Exhibits: Jan. 5-8
- MACWORLD Expo Users Conference: Jan. 6-8

Conditions and Policies:

- Payment must accompany form for registration to be complete.
- Purchase orders not accepted.
- Fax and mail registrations received after Dec. 4 will be returned unprocessed.
- This form cannot be used for on-site registration.
- All registration fees are non-refundable and credentials are non-transferable.
- A \$20 fee will be charged for all returned checks.

DEADLINE!

PLEASE READ!

- The Deadline for all fax and mail registrations is Dec. 4. All fax and mail registrations received after this date will be returned.
- You may still register at regular prices via Web or phone from Dec. 5 - Dec. 30.
- If you register between Dec. 5 and Dec. 30, you MUST pick up your badge on-site at the On-Site Badge Pick-Up Counter.
- All international (including Canada) attendees must pick up badge on-site at the On-Site Badge Pick-Up Counter.
- Confirmation of registration will be sent once registration is processed. Pre-registration deadline is December 4, 1998.
- U.S. Badges will be mailed after December 22 for registrations received through 12/4/98.
- Workshops and Conference Sessions are subject to change. Check our web site frequently for updates: www.macworldexpo.com
- On-Site Registration Hours:
January 4: 6:00 a.m. - 4:00 p.m.,
January 5-7: 8:00 a.m. - 6:00 p.m.,
January 8: 8:00 a.m. - 4:00 p.m.

PRIORITY CODE

MWA

REGISTER NOW!

Use ONE of the following methods to register with this form:

Phone: 800-645 EXPO or 781-551-9800 outside of the U.S. (\$5 Service fee does apply) **THROUGH DEC. 30.** Registrations received after 12/4 will be charged at regular pricing.

Web: www.macworldexpo.com **THROUGH DEC. 30.** Registrations received after 12/4 will be charged at regular pricing.

Mail to: MACWORLD Expo/San Francisco P.O. Box 9103, Norwood, MA 02062-9103. **THROUGH DEC. 4 ONLY.**

Fax: 781-440-0359. Faxed registration form must include credit card information **THROUGH DEC. 4 ONLY.**

(TTY) Service is available for the hearing impaired. Dial 781.440.0366.

DARK VENGEANCE™

vengeance is a discipline

You will undertake a journey of exploration and discovery—vast keeps, twisted forests, ominous mountains, cold crypts, vaulted halls.

vengeance is a revelation

You must master three radically different combat styles—the skull-splitting subtleties of hand-to-hand combat, the long-range guile of spell casting, and the knife-edged nuances of trickery.

vengeance is an odyssey

Three scorned souls with three burning desires set out on three unique paths through 17 immersive levels of in-your-face single-player action. Or you can vie with up to 32 others in intense multi-player combat.

It's time to take off the kid gloves and put on the spiked ones

800-229-2714

Call for a free catalog or visit our website:
www.wizworks.com/macsoft

or visit the GT Interactive online store:
<http://store.gtinteractive.com>

Dark Vengeance™ ©1998 Reality Bytes, Inc. All Rights Reserved. Created by Reality Bytes, Inc. Distributed and published by MacSoft, an affiliate of GT Interactive Software Corp. All other trademarks are the property of their respective companies.

Choose 31 at www.macworld.com/getinfo

MacSoft®

An affiliate of GT Interactive Software Corp.
2300 Berkshire Lane No., Plymouth, MN 55441



Secrets

What Do You Want to Read Today?

MAKING THE MOST OF ADOBE READER

by Joseph Schorr

Adobe's Portable Document Format is just about everywhere you look nowadays: software manuals, store catalogs, and even IRS tax forms are all available as PDF files. What makes these files so popular is that they're self-contained documents that retain their original formatting and can be read on a Mac or a PC with the aid of a small, free program called Acrobat Reader (www.adobe.com/acrobat/readstep.html).

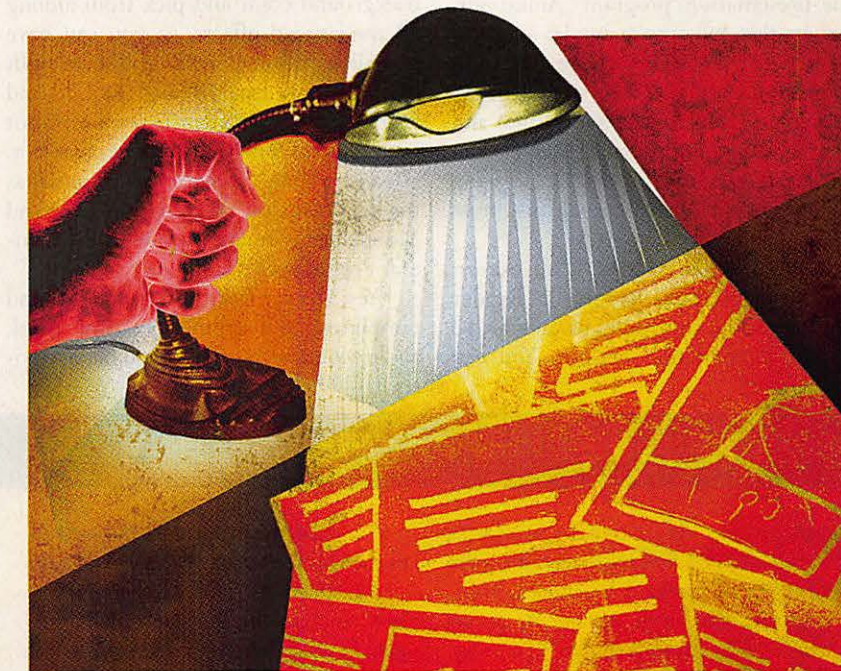
If PDF files seem to be coming at you from every direction, it's time to get up to speed on how to open, navigate, and extract data from them as quickly and easily as possible—and that means tapping into some of the surprisingly powerful but easy-to-miss features lurking in Acrobat Reader.

Speed Reading

Reader is designed for fast, easy document viewing. To really speed through documents with a minimum of clicking and scrolling, however, bypass the Reader tool bar and use some shortcuts.

- Move from page to page by using the page up and page down keys or the arrow keys (right and down move you forward; left and up move you backward). To jump to a specific page, press ⌘-5, type in the page number, and press return.

- To scroll vertically *within* a page, hold down the shift key while using the



arrow keys; to scroll horizontally, press shift-left arrow and shift-right arrow.

- To see more of your document at once, press ⌘-shift-B to hide the Reader tool bar and ⌘-shift-M to hide the menu bar. The same keystrokes make those items reappear.

One-Shot Text Grabbing

Often you'll want to convert the content of a PDF file into plain text that you can paste into another document. To grab a specific chunk of text, you use the Select Text tool (press ⌘-option-4) and then drag over the text. But if you want to grab

all the text in a document, you can bypass the Select Text tool—just press ⌘-A to select all the text in one shot and then ⌘-C to grab every word in the document.

To confirm that you have indeed copied everything you intended *before* switching to another application to paste it, use Reader's Show Clipboard command in the Window menu to get a preview of the selected text or graphics.

Turn Pages into Pictures

You can also turn an entire page of a PDF file—including all the text and graphics

continues

ics—into a single image that can be copied and pasted into another document. Press ⌘-option-5 , to switch to the Select Graphics tool; ⌘-A , to select the entire page as one giant graphic; and ⌘-C , to copy it—and then switch to another application to paste the page.

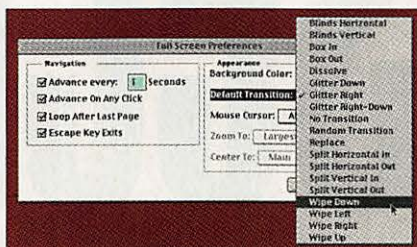
Reader as PowerPoint

If you think Reader is nothing more than a bare-bones document viewer for reading online manuals, you obviously haven't tried the mind-blowing presentation features that essentially turn it into a tiny, free version of Microsoft PowerPoint. Yes, Reader is the world's least-expensive slide-presentation program.

When you open a PDF file with Reader and press ⌘-shift-L , the page instantly fills every inch of your screen—no windows, no menu bar—just like a slide-presentation program. Amazingly, even in this full-screen mode, you can still move from page to page (by using the up and down arrow keys or by pressing ⌘-5 to jump to a specific page) and zoom in and out (press ⌘-L and then choose a level of magnification). To jump back into normal-screen mode, just press the escape key.

It gets better. Choose Full Screen from the Preferences submenu in Reader 3.0's File menu, and you're given a whole array of presentation options. You can

have Reader advance from page to page automatically at any interval between 1 and 60 seconds or have it wait until you click the mouse. You can make a presentation loop. You can choose to make the



Wiped Out Using Reader's Full Screen Preferences, you can apply transitions such as wipes and dissolves to slides in a slide show.

cursor visible during a slide show or keep it hidden. You can select virtually any background color and pick from among 18 transitional effects, so you can have one slide dissolve, wipe, glitter, or split into the next (see "Wiped Out"). And let's not forget about antialiased text; not even PowerPoint can make text look as good on a slide. (To have Reader antialias the text, turn on the Smooth Text And Monochrome Images option in the General Preferences dialog box.)

Yes, Reader lacks builds, background templates, and animation. But think about what it *does* offer: if you have Acro-

bat, you can build a presentation in virtually any program; distill it into a PDF file; and head out on the road, knowing that you'll be able to present it on any Mac or PC you encounter, using a *free* program that just about everyone on earth has installed.

Keep Yourself Current

If you try to open a PDF file you've downloaded from the Web and it won't cooperate (or generates an error message), check the version of Acrobat Reader you have installed. Most current PDF files are saved as Acrobat 3.0 documents and use a compression scheme that earlier versions don't support. To solve the problem, just trash Reader 2.1 and download a fresh copy of the current version, 3.0.1.

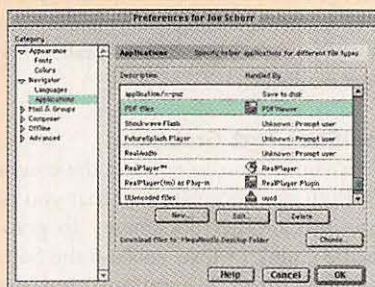
Acrobat Reader, like SimpleText, is one of those little programs that seem to multiply on your hard disk; it's not usual for installers to dump extra copies of it, given the fact that so many software manuals, reference guides, and tutorials are now supplied in PDF form. Clean out those superfluous copies to avoid inadvertently trying to open documents with the wrong version. **m**

JOSEPH SCHORR is coauthor of *Macworld Mac Secrets*, fifth edition (IDG Books Worldwide, 1998), which is available in PDF form.

Reader and the Web

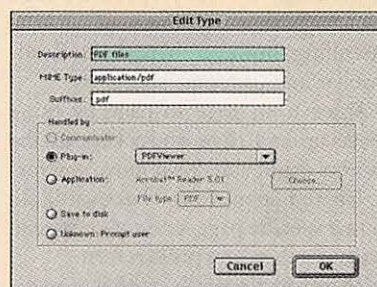
ONE OF THE MOST COMMON PLACES to run into PDF files these days is on the Web: forms, product brochures, maps, diagrams, and other documents are all available as downloadable PDF files. Fortunately, the current versions of both Netscape Navigator and Microsoft Internet Explorer let you view PDF files without leaving your browser—but only if it's properly configured with Adobe's PDFViewer, a version of Acrobat Reader that actually runs within the browser. If Navigator doesn't know what to do when it stumbles on a PDF file, here's how you can teach it to be PDF-savvy (the directions are similar for Explorer).

1. Make sure Navigator's Plug-ins folder contains the Adobe PDFViewer plug-in.
2. Open Navigator's Preferences window, and click on the Applications category. This is where you specify which program or plug-in to use when opening each type of file. Scroll down to the Portable Document Format entry, and click on Edit.



Choose your plug-in in the Preferences window.

3. In the Edit Type dialog box, make sure the information is filled out exactly as shown here. Now, whenever Navigator encounters a PDF file, it will fire up PDFViewer and display the document in the browser window. (If you click on the Application radio button instead and select Acrobat Reader, Navigator will launch Reader to display PDF files.)



The Edit Type dialog box should look like this.

Tips, Tricks, and Shortcuts

by Lon Poole

Leave your PowerBook behind if you just want to read your e-mail on the road.

John Haynes of Euclid, Ohio, suggests using a Web e-mail account instead to get

free access to your regular e-mail from anywhere you can lay your hands on a Web browser: a colleague's office, a friend's house, even a public library.

Don't worry about stranding your e-mail messages on foreign computers—you can set your Web e-mail account to leave the e-mail on its original server, where you can retrieve it later with your own computer. Just make sure your regular e-mail account lives on a POP3 server (the most common kind) that isn't behind a security firewall. Some corporate e-mail servers are behind firewalls, but most Internet service providers' servers aren't.

You can get a free Web e-mail account from Yahoo (www.yahoo.com) or Hotmail (www.hotmail.com) and configure it to check your regular e-mail account. You can also do this with an existing Yahoo RocketMail account.

To set up your Web e-mail account so that it checks your regular e-mail account, you need to know the name of your POP server (for example, pop.earthlink.com), your e-mail ID (usually the first part of your e-mail address), and your e-mail password. To configure Yahoo Mail to check up to three POP accounts, click the Options link and then the External Mail link. To set up Hotmail to check up to four POP accounts, click the Options link and then the POP Mail link.

You must take some extra steps to keep your Web e-mail private when using a public or borrowed Web browser. In Yahoo Mail, click the Exit link and then the Sign Out Completely link. In Hot-

mail, click the Log Out link. If you use Microsoft Internet Explorer, close the browser window after using Hotmail—this prevents the next person from using Explorer's Back button to return to the Hotmail log-in page, copy your password, and paste it into the Scrapbook where it can be read unencrypted. This isn't a problem with Netscape Navigator, which clears the password when you use the Back button. Yahoo Mail clears your pass-

iMac in a Small Network

Q. I'm buying an iMac, and I'll need to transfer onto it the contents of my Power Macintosh 7200's hard drive. The data won't fit on the Zip disks I have, but as both Macs have an Ethernet port, I wonder how hard it would be to connect the two in a network. What extras would I have to buy?

PAUL BELMORE
Boring, Oregon



A. If both Macs are in the same room, you can interconnect them with nothing more than a 10BaseT crossover cable, available at computer stores and mail-order companies for about \$10. Your Power Mac 7200 has a 10BaseT Ethernet port, and your iMac's 100BaseT port is compatible with 10BaseT. Many other Mac models have an AAUI Ethernet port and require a \$30 transceiver for 10BaseT. Still others have no built-in Ethernet and require an Ethernet adapter card.

word automatically with either browser.

For additional security, clear the browser cache, which contains copies of messages you've read, and quit the browser. To clear the cache in Internet Explorer, choose Preferences from the Edit menu, expand the Web Browser category, select Advanced under it, and click the Empty Now button. In Navigator 4, choose Preferences from the Edit menu, expand the Advanced category, and select Cache under it. Then click the Clear Disk Cache Now button. In Navigator 3, choose Network Preferences from the Options menu, click the Cache tab, and then click the Clear Disk Cache Now button.

For longer-distance networks or those containing more than two computers, you need a 10BaseT hub and regular (not crossover) cables to connect the computers to the hub. Prices start at around \$30 for a generic five-port 10BaseT hub and go up depending on the number of ports and the brand name. Buy cables certified for a 100BaseT network—known as Category 5 cables—since they're not much more expensive than the Category 3 cables used for 10BaseT networks. If you route the Category 5 cables carefully to avoid sharp bends and proximity to electrical wires, you should be able to

continues

upgrade your network with a 100BaseT hub later if you acquire more computers with 100BaseT ports like the iMac.

Set the AppleTalk control panel (Network control panel for System 7.5.5 or earlier) on your Macs to connect via Ethernet. On one Mac, turn on file sharing with the File Sharing control panel (Sharing Setup control panel in System 7.X). Connect to this Mac, using the Chooser on the other Mac (or Macs). For detailed instructions, see the Sharing Files topic in the Help menu's Mac OS Help (or the Guide menu's Mac OS Guide, in System 7.X). If you use a crossover cable to interconnect two Macs, the first Mac to start up may reset its AppleTalk setting to the built-in LocalTalk (printer) port. If so, change the Connect Via setting in the Mac's AppleTalk control panel.

iMac Disk-Format Fears

Q I was looking at the spot where my new iMac will sit, when a sudden thought racked me with fear: the iMac will surely use the new Mac OS Extended Format, HFS+, available with Mac OS 8.1. But I understand that this new disk-formatting scheme may cause files to be unreadable by service bureaus or other Macs not upgraded to HFS+. Should I worry, or do I have the whole HFS+ issue backwards?

ANDREW DUNCAN
Atlanta, Georgia

A Yes, the iMac's internal hard disk uses the Mac OS Extended Format, but an internal disk's format doesn't affect how files are stored on other disks. If you copy files to an external disk or send them as e-mail attachments, the destination disk's format determines how the files are stored.

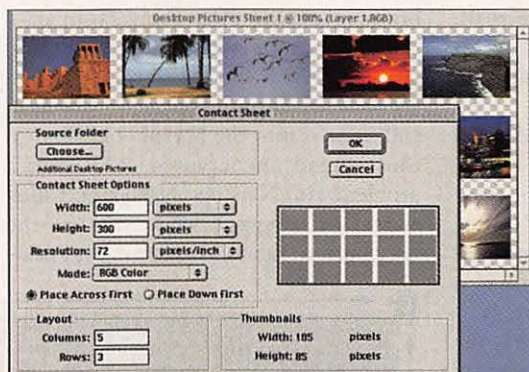
The problem you've heard about occurs if you insert a removable disk, such as an Iomega Zip disk, that uses the Mac OS Extended Format into another Mac that is running Mac OS 8 or earlier—which can't read files on Mac OS Extended Format disks. That same removable disk would be accessible on any Mac running Mac OS 8.1 or 8.5, even if that Mac's start-up disk uses the Mac OS Standard Format. Keep this in mind if you reformat any removable disks in Zip, SyQuest SparQ, or Imation SuperDisk drives that you attach to your iMac.

Do not use Symantec's Norton Utilities for Macintosh (NUM) 3.5.1 or earlier, because it can damage a Mac OS Extended Format disk. Use NUM 4.0, which can fix damaged Mac OS Extended Format disks. Another disk-repair utility that works with the Mac OS Extended Format is Apple's Disk First Aid 8.2, which comes with the iMac and is available for free from Apple's Software Updates Library (http://swupdates.info.apple.com/cgi-bin/lister.pl?Apple_Support_Area/Apple_Software_Updates/US/Macintosh/Utilities/Disk_First_

Then make individual pages for the full-size images, and you have a gallery.

JACOB GLAZER
New York, New York

You can also make a page of thumbnails with the \$25 iView Multimedia catalog shareware, from Script Software (415/449-3450, www.scriptsoftware.com). It's more flexible and faster than Photoshop, and handles movies as well as pictures. Just choose HTML Gallery from the Export submenu of the File menu, and iView creates an HTML page of thumbnails with links to full-size image files.—L.P.



Instant Web Thumbnails You can make a page of thumbnails for your Web site with Adobe Photoshop 5.0's Contact Sheet command. Specifying the size of the contact sheet and the number of rows and columns it has determines the thumbnail proportions.

Aid). Other alternatives include MicroMat's \$150 TechTool Pro 2 (707/837-8012, www.micromat.com) and Total Recall's \$90 HFS MacMedic (719/380-1616, www.macmedic.recallusa.com).

Quick Web Thumbnails

TIP If you want to display a gallery of images on your Web site, create a page of quick-loading image thumbnails that a visitor can click individually to see the full-size images. You can make a thumbnail page easily with Adobe Photoshop 5.0's Contact Sheet command, found in the File menu's Automate submenu. It takes all the full-size images from a folder you specify, creates thumbnails for them, and places the thumbnails in neat rows in a new image that looks like a photographer's contact sheet (see "Instant Web Thumbnails"). Save this image as a JPEG file, and then create an image map of it, using either SimpleText and HTML or a Web authoring application such as Adobe PageMill.

A Few Find File Tricks

TIP After finding an item with the Find File application in Mac OS 8.1 and earlier, you can simultaneously open the item and quit Find File by pressing the option key while double-clicking the item in the Items Found window. This saves you the trouble of going back to quit Find File.

CHAS CONWAY
Mabomet, Illinois

For more tricks for Mac OS 8.1 and earlier, choose Find File Shortcuts from Find File's Help menu (Guide menu in System 7.X). Mac OS 8.5's Find has fewer shortcuts; to learn them, choose Mac OS Help from the Help menu. In the Help window, click Files And Programs on the left and then click Finding Files on the right. When the Finding Files article appears, scroll down and click the Shortcuts For Finding Files link.—L.P. **m**

LON POOLE answers readers' questions and selects reader-submitted tips for this monthly column. His latest book is *Macworld Mac OS 8 Bible* (IDG Books Worldwide, 1997).

All shareware and freeware mentioned in *Quick Tips* is available from the Macworld Online software library (www.macdownload.com).

We pay \$25 to \$100 for tips on how to use Macs, peripherals, or software. Please include your full name and address, so that we can send you your payment. Send questions or tips to quicktips@macworld.com or to Macworld Quick Tips, 301 Howard St., 16th Fl., San Francisco, CA 94105. All published submissions become the sole property of Macworld. Due to the high volume of mail received, we cannot provide personal responses.

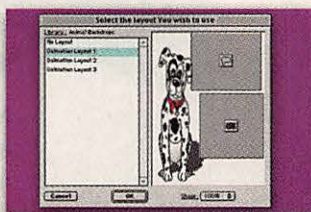


Design & Print STUDIO

Create Greeting Cards, Banners, Calendars, Business Cards, Letterhead, Certificates, Invitations, Postcards, Signs and More

Design & Print Studio is the fastest and easiest way to create your own stunning designs. Create professional-quality greeting cards, calendars, postcards, signs and more. Design & Print Studio gives you everything you need to get started quickly on designing your own projects. Includes many of the same desktop publishing tools used by the best graphic artists. Choose from one of hundreds of professionally-designed templates, add your own text and, within minutes, the program generates high-quality designs.

Over
5,000
Graphic Images
Includes
300
True Type
Fonts



1 Choose from hundreds of professionally-designed templates or easily create your own.



2 Place graphics and text using the step-by-step instructions.



3 Print!

Desktop Labels Deluxe

Create Labels, Barcodes and Mailing Lists in one easy-to-use program

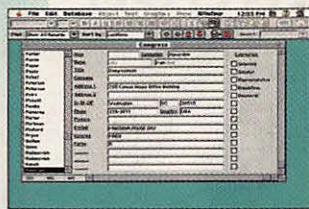
- Store Your Mailing Lists in the Powerful Database
- Design Professional Labels in Minutes
- Create Personalized Letters and Brochures
- Create and Print Virtually Any Kind of Barcode
- Flexible Graphics and Page Layout Tools

Create labels, barcodes, mailing lists, personalized form letters, tickets and more. Just design your label or document, enter or import your names into the database, and print. Create and customize your own professional labels or select from hundreds of built-in label formats. Whether you're printing one label or thousands, Desktop Labels Deluxe makes it easy.



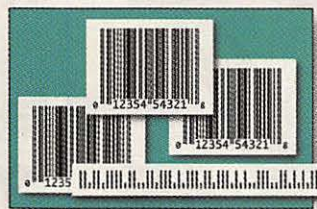
Innovative Label Designer

Desktop Labels Deluxe gives you many of the same powerful graphics tools found in the best desktop publishing programs. You can design your own professional-quality labels in just minutes.



Powerful Database & Address Book

Holds up to 32,000 names. The built-in database & address book makes it easy to enter names from your keyboard or import them from another program. Once entered, you can quickly find the names you want, arrange them in any order and print mailing labels using the built-in label designer.



Print Virtually Any Kind of Barcode

If you wish, Desktop Labels Pro will automatically print postnet barcodes on your mailing labels to help speed up post office delivery. Or, you can use Desktop Labels Pro to print virtually any kind of commercial barcode.



800-229-2714

Call for a free catalog or visit our website:
www.wizworks.com/macsoft
or visit the GT Interactive online store:
<http://store.gtinteractive.com>

Professional Publishing Tools
for Your Macintosh®

Choose 27 at www.macworld.com/getinfo

MacSoft®

An affiliate of GT Interactive Software Corp.
2300 Berkshire Lane No., Plymouth, MN 55441

Turn your Web site into a work of art



New Painter 5.5 Web Edition™ helps you create extraordinary artwork—for print and the Web—with natural-looking results you won't find anywhere else.

A full, Natural-Media® toolbox.

Design with traditional artists' tools right on your computer desktop. Use paint brushes, felt pens, chalk, watercolors and oils. Incorporate textures from canvas to impasto to paper, all to help you create a one-of-a-kind look.

New Web features.

Now Painter helps you quickly create incredible effects for your Web site, too. Image Slicing for faster downloads, JavaScript rollovers, client-side image maps, and easy buttons and back-grounds will help you make stunning web sites.

Bonus buttons, backgrounds, and more!

More than 1,000 ready-to-use Web buttons, backgrounds, photos, and textures are included free.

Get new Painter 5.5 Web Edition today, and see how it can help you stand out, naturally.



the
creative
solution



order

products

gallery

search

help

<http://www.metacreations.com>



MetaCreations.
The Visual Computing Software Company

www.metacreations.com
800.846.0111 Dept.# 1002

create

GRAPHICS

Photoshop Retouching Techniques

Tips and Tricks for Cleaning Up Your Images

by David Blatner

We can argue all day about the ethics of digital imaging—whether it's acceptable to remove an obstructing telephone pole from a picture of the house you're trying

to sell, or whether the media should be allowed to digitally alter the images we encounter in newspapers and magazines. Ethical or not, retouching is a part of life in most commercial photo labs, and Adobe Photoshop is an excellent tool for the job.

What follows are some techniques to keep in mind when retouching scanned images in Photoshop, whether you're removing specks of dust or an entire element from an image. You can decide for yourself how far you want to take these methods. Just make sure that when you retouch an image, you have the right to do so; some photographers are (justifiably) very touchy about their images and believe that any alteration degrades the truthfulness of the picture.

Rules of the Game

When you're retouching images in Photoshop, always work in the 100 percent view (where one screen pixel equals one image pixel); otherwise, your screen display won't accurately represent the image data. And work on a layer separate from the original image whenever possible. The original image will ultimately be altered when you flatten the layers, but until then you never know when you might need those original pixels.

If you're laboring under the misconception that dirty, noisy film grain in digital images is undesirable, think again; photographic grain can be your friend, masking all kinds of retouching. In fact, with most images, the biggest problem is

losing film grain in the retouching process, so some areas of the images become flatter and less noisy than others. Do whatever it takes to avoid or correct the problem, even if that means using the Add Noise filter to restore grain to the image. Of course, if the picture was taken with a digital camera, there won't be any film grain to begin with; don't add noise to such an image unless you're trying for a special effect.

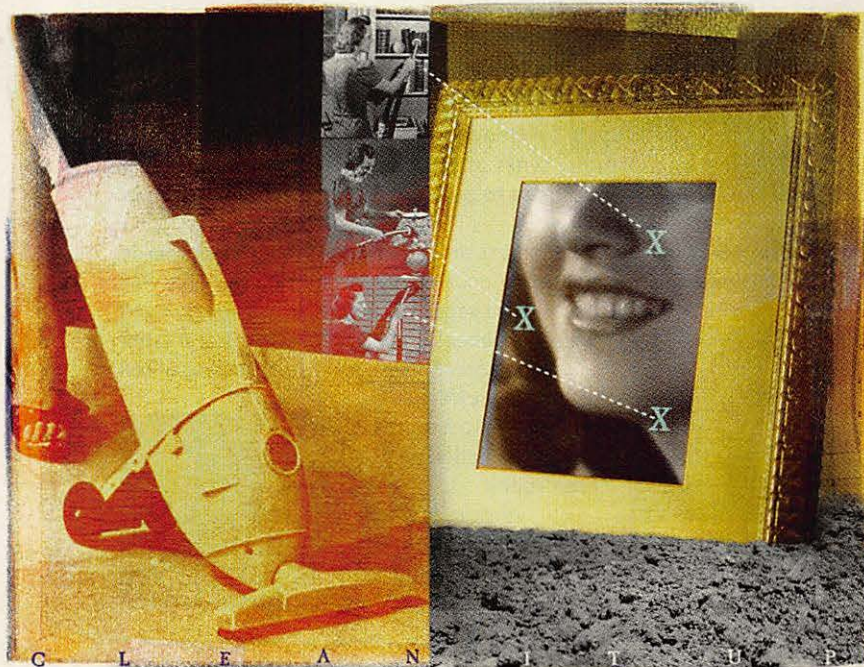
And finally, a warning: the human eye is extremely good at seeing patterns and inconsistencies. It's important when retouching to pay attention to the scene as a whole, not just to the piece you're working on. Removing a blemish from a photograph can cause even-more-blatant problems if you ignore lighting direction, shadows, and the overall tone of the image.

A Clean Fix

Retouching is more art than science, and the process of creating art can be learned only by doing (and redoing). The techniques described here can help, but it's only by applying them to a variety of images that you can start combining these methods and coming up with your own. Whether you're repairing a nineteenth-century photograph, taking a few years off the subject of a portrait, or creating a three-headed mongoose for a tabloid, the goal is to feel comfortable using retouching to fool viewers' eyes. **m**

DAVID BLATNER is the coauthor of *Real World Photoshop 5* and *The QuarkXPress 4 Book* (both from Peachpit Press, 1998). You can reach him at david@moo.com.

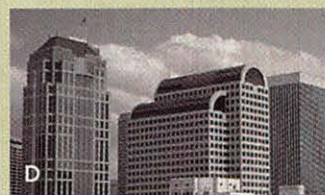
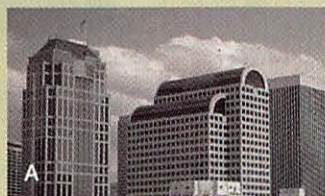
continues



Removing Spots

OF ALL THE TOOLS PHOTOSHOP GIVES YOU FOR RETOUCHING, THE MOST important is the rubber stamp. This tool makes it easy to erase annoying dirt and spots by duplicating nearby pixels to obliterate the specks.

- 1 Create a new layer, and then click on the Use All Layers check box in the Rubber Stamp Options palette (in version 4, the box was called Sample Merged Layers).
- 2 Select New View from the View menu, zoom way in so you can see the pixels in one of the views (B), and set the other view to 100 percent (A). Work in the zoomed-in view, but always check your work in the 100 percent window.
- 3 Choose a hard-edged brush (softer edges blur the texture of the film grain) from the Rubber Stamp Options palette.
- 4 Try not to paint with a dragging motion. Instead, option-click to pick a source point and then click on the offending spot to copy that source (C). Check your results in the 100 percent view (D).
- 5 If you need more than one click to remove the spot, change your source point for each correction, to avoid creating noticeable patterns. The result is a lot of clicking and option-clicking but also a much better final product.

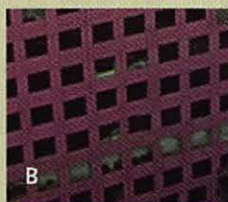


Dragging with the Rubber Stamp Tool

There are times when click-click-clicking with the rubber stamp tool just doesn't cut it. If you're trying to remove a larger scratch or copy an area of an image—say, to duplicate a series of windows on a building at another point on the building—you'll need to paint by dragging the mouse rather than by clicking.

Fortunately, Photoshop 5 improves on the previous rubber stamp tool in a subtle but important way (actually, Adobe simply changed it back to the way it worked in version 2). If you clicked and dragged with the rubber stamp tool in version 3 or 4 (after selecting a source point), you risked creating a "hall of mirrors" effect (A), because the tool copied pixels that had *already* been copied.

In version 5, the rubber stamp ignores the already-copied pixels while you're dragging; it copies only the original, underlying pixels (B).



Removing Lines

SOME OF THE MOST TEDIOUS RETOUCHING tasks come in the form of long, thin scratches, or power lines that always seem more

noticeable in a photograph than they did in reality. Photoshop's pen and rubber stamp tools can work together to erase such lines when they lie over flat areas that have little detail. (You would think Photoshop's built-in Dust And Scratches filter would work for this kind of thing; it doesn't and can actually do more harm than good.)

- 1 This barn would be picture-perfect if it weren't for that pesky rope dangling in front of the flat blue sky. We could use just the rubber stamp tool to get rid of it, but that would take much too long.



- 2 Instead, draw a path with the pen tool, keeping it as close to the center of the line as possible. Save the path by double-clicking on the Work Path in the Paths palette.

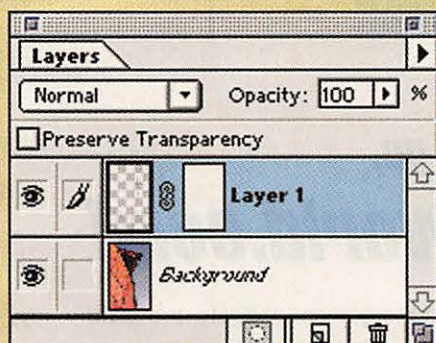


- 3 Click on the rubber stamp tool and choose a soft-edged brush that's slightly wider than the line at its widest point. Set the mode to Lighten, since this is a dark-colored object (if it were a light-colored object, you'd use Darken). Option-click directly to the left or the right of the beginning of the path to set the source point.

4 Create a new layer, making sure that Use All Layers is turned on in the Options palette, and drag the path over the Stroke button at the bottom of the Paths palette. The result: the line is replaced by sky. (A little spot retouching was necessary to take out the rope where it crossed the wood.)



5 When retouching is done on a separate layer, you can see "before" and "after" views by toggling the eyeball in the Layers palette. If you've unintentionally painted over an area of the image, try adding a layer mask and painting in black over that area.



6 The final image, sans rope. Because we set the mode to Lighten, the copied pixels look natural, not duplicated.



Removing Features

create
GRAPHICS

TINY OBJECTS SUCH AS DUST AND SCRATCHES ARE THE BREAD AND BUTTER of the retouching industry, but sometimes major surgery is required. Removing an object is much more difficult than removing a mere spot; the larger the element you want to remove, the harder it will be to retouch the picture and still fool viewers' eyes. In this example, we want to remove a pencil from an image. The technique we'll use to do that works because the background is relatively flat, lacking details that would be recognizable when it's copied.

1 Select the area you want to remove, and feather the selection slightly (perhaps four or five pixels) with the lasso tool.



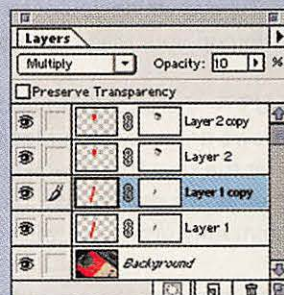
2 Drag the selection to the area you want to copy, and duplicate the background pixels onto a new layer by pressing ⌘-J.



3 Use the Move tool to drag the new layer onto the pencil. (Photoshop wouldn't ordinarily display the dashed marquee; it's included here to make the effect easier to see.)



4 The shadows that were cast on the pencil and selected area are now obscured, causing a visual anomaly. To fix this, you can duplicate the layers, add layer masks, set layer modes and opacities—in general, do anything it takes to correct the problem.



5 The final flattened image. A process that would have taken half an hour with the rubber stamp tool took only minutes with this technique.





w w w . i m a c w o r l d . c o m
G A M E S , G A D G E T S , G E A R



***Do not stop, do not pass go,
go immediately to iMacworld.com!***

Introducing iMacworld, www.imacworld.com. Your first stop online for Mac games, gadgets and gear!

Finally, everything you need in one destination! Whether it's Mac gaming, creating a family photo album, setting up your Mac home office or building a reference library, iMacworld has it all.

PLUS — the best thing about iMacworld is the "i" refers to **YOU!** Because in addition to the most reviews on everything Macintosh — including all the BUZZ about the iMac — and the latest gadgets to hit the desktop, iMacworld is a whole community at your fingertips, and you're in the driver's seat! Whether it's online chat, message boards, mailboxes, or live events, it's your call — and as the community grows, so will your options!

Don't waste another minute in cyberspace; go to www.iMacworld.com now and check out:

☐ **Games**

☐ **Home Office**

☐ **Education**

☐ **Get Connected**

☐ **Gadgets**

☐ **Hobby Shop**

Easy Tables in QuarkXPress

Tricks and Tools Take the Frustration Out of Creating Tables

by Brad Walrod

One of the most common complaints among QuarkXPress users of all skill levels is that tables are just too difficult to create quickly or with any degree of accuracy with XPress's built-in table tools.

An alternative is the wealth of dedicated XTensions offered by third-party developers (see the sidebars). All the table-making XTensions have one thing in common: they do the math for you by adding together the widths of the longest entry in each of the columns, subtracting that total from the table width, and distributing the remainder of the space among the gutters between columns. What differentiates the XTensions are their interfaces, the options they offer for aligning columns and distributing gutter space, and the way they handle cells.

If you're willing to do the math on your own or have a good eye for aligning columns manually, you may be able to manage without XTensions. You can get by with using XPress's tab commands if all you're doing is aligning a few columns of numbers or single lines of text, but any job involving more than a handful of tabs quickly becomes daunting. However, once you know the ins and outs of the tab commands, you'll be creating tables within QuarkXPress faster and with less hassle.

Setting Paragraph Tabs

Once you've entered or imported your tabbed text and applied the appropriate character and paragraph styling, you can use XPress's Paragraph Tabs dialog box to align the columns:

1. Click anywhere in a line with tabs.
2. Select Tabs, from the Style menu (or type ⌘-shift-T).
3. In the Paragraph Tabs dialog box, choose an alignment.
4. Type in a numeric value, or drag an arrow on the tab ruler to the desired position.
5. Click on Apply.

6. Repeat steps 3 through 5 until the columns are aligned; then click on OK.

Of the six choices for alignment—Left, Center, Right, Decimal, Comma, and Align On—the last one is the most flexible (see “Different Columns, Different Alignments”). With Align On, you can specify any character as the one on which all the entries in the column will be aligned. In a column that's aligned on a particular character (including a decimal or comma), items that don't contain the alignment character itself are placed to the left of the point on the line where the character would logically appear. Hence, a column of numbers, for example, will always be aligned properly, even if some of the numbers don't contain decimal places.

Adjusting Tab Settings

Prior to QuarkXPress 4.0, if you were to click on an existing alignment arrow and then type a number in the Position field of the Paragraph Tabs dialog box, all you'd do is create a new tab rather than edit the one that was selected. As of ver-

sion 4.0, however, an alignment arrow stays highlighted once selected; typing a new value actually changes the position of the tab. (If all else fails, you can always option-click in the tab ruler to get rid of the tab settings and start over.)

If you want to see whole numbers in the Paragraph Tabs dialog box, make sure you're in Actual Size or 200 percent view when using the ruler to create or position tabs. Otherwise, you'll end up with tab positions that go to thousandths of a point.

Using Style Sheets with Tabs

Although you can access the tab ruler when you're defining style sheets, this is not the best time to set tabs, because there's no Apply button. Instead, manually set up a table whose structure you will use frequently, and then select Edit: Style Sheets to create a style sheet that uses those settings. As long as you don't base the new style sheet on another style sheet, XPress will automatically pick up all the specs—including tab

continues



11.

settings—from the paragraph in which the cursor is sitting.

If you need to edit the tab settings in the style sheet, try playing around with them directly in the document. Record your changes on a piece of paper, and then edit the style sheet to reflect those changes. It's not an elegant solution, but it gives you the convenience of working on tabs within the document and the security of knowing that all tables using that style sheet will be updated automatically once any changes are made. Alternatively, you can create a fresh style sheet with your new tab settings and delete the old style sheet; when you're prompted for the name of the replacement style sheet, choose the one you just created.

Borrowing Tab Settings

Once you've assigned tab positions to a paragraph, it's relatively easy to copy them to other paragraphs, even if the settings aren't part of a style sheet. Just select some paragraphs (making sure the paragraph with the proper tabs is at the top of the selection), go into the Paragraph Tabs dialog box, and click on OK; those tab positions will be assigned to all the selected paragraphs.

An alternative is to copy attributes from one paragraph to another. To do this, click in the paragraph to which the settings will be copied and then option-shift-click in the paragraph *from* which the settings will be copied. Be careful, though; *all* the paragraph settings will be copied, including a style sheet if one has been applied.

Adding Horizontal Rules

Used judiciously, XPress's Paragraph Rules command (Style: Rules) can make even a table filled with the most-boring

	Employer code	Average deduction	Percent of net earnings	Rating
All responding employers				
BY REGION				
Pacific	WD40	748.9	77%	■
South Central	90210	830.1	16	▶
New England	CAR54	702.32	29	▲
Mid-Atlantic	ADAM12	252.2	56	●
South Atlantic	RT66	562	15	▼
BY INDUSTRY				
Consumer Products	HSKJ548	874	56	■
Manufacturing	ALMWD4	568.9	77	●
Wholesale	SK9ONF	1,074.9	64	■

Different Columns, Different Alignments Ignoring the column heads (which often aren't aligned the same as the column entries), note how each of the alignment types used here—right, decimal, aligned on percent symbol, and centered—positions the columns differently.

data look sharp. If your text starts at the left margin and ends at the right, you don't even need to worry about indenting the rules. Just specify a rule below the paragraph, choose an appropriate offset and width, and repeat for the remaining rows.

A note about offsets and widths: if you don't want the rule below the paragraph to disappear if the table is the last thing on the page, use fixed (rather than percentage) offsets. And never use the hairline thickness; that thickness can change on output, depending on which version of XPress you're using.

Another great use of rules—those that appear *above* the paragraph—is to create knockout heads that separate the sections of a table. Make your text white (or another light color), choose a darker color for the rule, and assign offset and thickness. The offset needs to be a negative number so that the rule “above” will actually rest below the baseline, and the thickness needs to be greater than the tallest character you're trying to highlight.

Upgrading to XTensions

If you find yourself creating or editing many tables—especially if they need to be produced quickly and accurately—look into the current crop of table-making XTensions. Even the inexpensive ones with limited feature sets should help noticeably speed up your table production. Gluon TableMaker, for example, is inexpensive and simple to use. If you need to make tables that have multiline entries or run onto multiple pages, you may want to choose from the more powerful HX EasyTable, Entable, and Tableworks Plus XTensions.

And if you're stuck with a folderful of tables created in Microsoft Word, you can convert them into XPress objects by using Extensis's QX-Tools 4.0. Just export your tables (from the Print dialog box) as PostScript or EPS files, which can then be read by the QX-VectorEdit module. **m**

BRAD WALROD is a Brooklyn-based typesetter, trainer, and consultant and the author of *QuarkXPress Unleashed* (Random House, 1994).

Product Information

QuarkXPress 4.0

Quark
303/894-8888
www.quark.com
List price: \$995

Entable and Tableworks Plus

Tableworks
425/392-7745
www.tableworks.com
List price: \$299 each;
bundle, \$449

FCSTableMaker

FCS (distributed by
The World-Wide Power
Company)
303/940-0600
www.ibacom.es/fcs/
List price: \$95

Gluon TableMaker

Gluon
212/343-1755
www.gluon.com
List price: \$49

HX EasyTable

HanMac Software
(distributed by The World-
Wide Power Company)
303/940-0600
www.hanmac.com
List price: \$239

QX-Tools 4.0

Extensis
503/274-2020
www.extensis.com
Estimated price: \$150

XTable

York Graphic Services
717/792-3551
www.ygsi.com
List price: \$99

XTensions distributor

The World-Wide Power
Company
303/940-0600
www.thepowerco.com

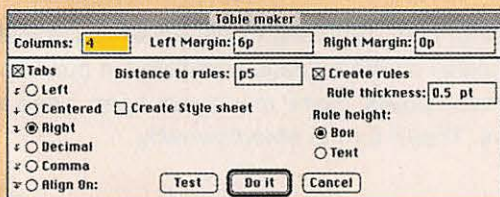
XTensions Add Vertical Rules . . .

FCS'S FCSTABLEMAKER XTENSION IS VERY EASY TO USE and offers some nice features you won't find either in XPress or in other table-making XTensions. Besides automating the creation of vertical rules and moving contiguous tab settings as a group, it lets you create evenly divided grids for pages or tables. FCSTableMaker may not be the only tool you need in order to complete a table, but it takes much of the drudgery out of the setup.

Here, we'll use the XTension to create a simple table of numbers with vertical rules separating the columns. All the features you'll need are accessible from a small, unobtrusive palette.



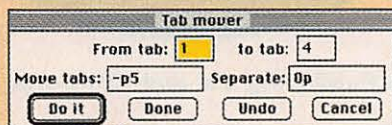
1 In the Table Maker dialog box, define the number of columns, the left and right margins of the table, and the alignment. Although all the columns initially have to use the same alignment, it's easy to change that once the table is set up.



2 To add vertical rules between columns, simply define the thickness of the rules and how far they should be offset from the text; the XTension does the rest. Rules can run from the top to the bottom of the currently selected text box, or they can align with (or extend a user-definable number of points above or below) the top and bottom of the text. Vertical rules are automatically grouped together.

Stub column	\$1234	\$5678	\$9012	\$3456
Stub 2	7890	1234	5678	9012
Stub 3	3456	7890	1234	5678

3 If you want to adjust the tab settings later, use FCSTableMaker's Tab Mover function. It moves columns to the left or right—or closer to or farther apart from each other—as a group. Best of all, the function works on all tables, whether or not they were set up with FCSTableMaker. If any additional formatting—tabular or otherwise—is needed, you can use XPress's character- and paragraph-formatting commands.



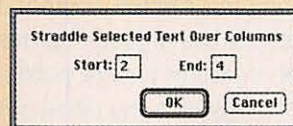
. . . and Give Your Tables Style

IF YOU'RE BUILDING TABLES THAT REQUIRE DIFFERENT alignments from column to column as well as heads that straddle multiple columns, take a look at York Graphic Services' XTable (also known as Mathable when sold with its equation-creating sibling, XMath). Here's how you create such a table.

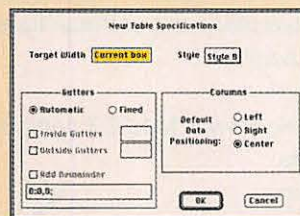
1 If the text box in which the table will reside requires a frame or some text inset, define these attributes with XPress's box-styling commands before getting started. Doing so allows XTable to factor these settings into its computations.

Types of user-specified gutters permitted				
Style	Inside	Outside	Both	Comment
A	No	No	No	Use this style with vertical rules.
B	Yes	Yes	Yes	This style table fills the measure.
C	Yes	Yes	No	These tables center in the measure.
D	No	No	No	Flush right; half gutter in front.
E	No	No	No	Flush left; half gutter after last column.
F	Yes	No	No	Flush right; left-over space in front.
G	No	No	No	All columns same width.

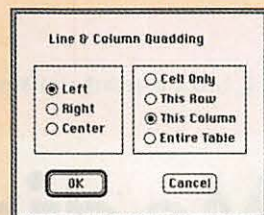
2 Select a piece of the straddling head, open the Straddle Selected Text Over Columns dialog box, and specify the columns the head will straddle.



3 Select all the text in the table, and open the New Table Specifications dialog box. Next, choose a table style—we'll use Style B, the most appropriate one for this type of table—and then select the column alignment most of your columns will use (in this case, centered).



4 Change the alignment of the last column and the straddling head by clicking anywhere in that column, calling up the Line & Column Quadding dialog box, and making the column flush left. Repeat the process for the second line of the straddling head. Finally, manually add paragraph rules—one under all the column heads and another under the straddling head—using XPress's rules feature.



Now you can cover the entire digital publishing spectrum

Available
Online!
www.emediaweekly.com

Introducing eMediaweekly

The **ONLY** newsweekly covering the **entire** content creation market for print, Web and multimedia—regardless of platform. It's expressly designed for the unique information needs of digital media managers involved in purchasing high-end content creation tools. Whether they're publishing on paper or in pixels, digital media managers need to keep abreast of changing technology with the latest news and reviews. They'll turn to eMediaweekly.

The Digital Publishing Core

With a qualified circulation of **85,000** eMediaweekly targets an exclusive core group of individuals involved in digital asset management and multi-purposing content for the Web, print and interactive publishing platforms.

Active Buyers of Content Creation Tools

eMediaweekly subscribers have plans to purchase these professional content creation tools in the next 12 months*...

- 84% plan to buy Apple Power Mac G3 computers
- 49% ...Pentium II desktops
- 58% ...Processor upgrades
- 43% ...Windows NT servers
- 80% ...Large screen monitors
- 57% ...Workgroup printers
- 70% ...Optical storage
- 60% ...Scanners
- 43% ...Graphic accelerator cards
- 59% ...Image editing software
- 55% ...Web authoring tools



For more
information and
charter rates,
call Karl Elken at
415.243.3515

*Source: Content Creator Study, April 1998

Published by Mac Publishing, L.L.C., a joint venture between Ziff-Davis Publishing Co. and IDG Corp.

«eMediaweekly»

THE NEWSWEEKLY FOR DIGITAL MEDIA MANAGERS

FileMaker Does Video

Transform Your Database Software into a Crucial Postproduction Tool

by Henry Bortman

Video postproduction typically involves untold hours of painstaking labor, but you can make the process a little easier with some planning. If you need to reduce hours' worth of raw video down to a handful of clips ready for editing, don't just start filling up your hard drive with gigabytes of video footage—first, figure out what you have. You can greatly economize on what clips you'll need to capture by logging your footage and creating batch-capture lists. And you can do this easily in the multitasking database software you probably already own: FileMaker.

A couple of years ago, I coproduced an educational video. We interviewed a dozen kids, generating more than ten hours of video that we needed to whittle down to less than ten minutes. We decided to transcribe the material first, and then select the best clips to capture in Adobe Premiere.

A Capable Assistant

We created a custom FileMaker database and logged each clip in its own record. We made FileMaker layouts for data entry, for printing clip logs, and for printing each record on a 3-by-5-inch card. We shuffled the cards around on the floor, picked our favorite clips, and experimented with different sequences before ever opening Premiere. Finally, we produced a batch-capture list by exporting the FileMaker data to a tab-delimited text file. We imported the list into Premiere and easily captured our desired clips.

FileMaker proved to be a highly adaptable postproduction assistant. So if you're about to embark on a video project, try this technique with FileMaker—it will make the video-postproduction process less of a pain. **m**

Contributing Editor HENRY BORTMAN is coproducer of *Both of My Moms' Names Are Judy*, a video screened in more than 15 international film festivals.

Making Movies with FileMaker

THIS TECHNIQUE FOR LOGGING AND CAPTURING CLIPS CAN WORK FOR ANY documentary, training video, or other type of video project that's primarily "talking heads"; logging actions would require additional fields. With modification it can also work with any video-editing software that imports batch-capture lists. For batch-capture to work, you must use a video camera that records SMPTE time code, and capture your clips from a playback deck that supports time-code control.

Step 1: Define Your Database Fields

Begin by selecting Define Fields from FileMaker's File menu. You can add or modify fields later, but start with those in "Basic Fields for Your Video-Clip Database."

Basic Fields for Your Video-Clip Database

- Talent:** A text field with the name of the person interviewed.
- Topic:** A pop-up list of sections of the video that you determine. This lets you easily assign each sound bite to a particular section.
- Sound Bite:** A text field with the transcribed audio.
- Comments:** A text field for noting anything interesting—or annoying—about a shot.
- Shot Type:** A pop-up list with values for the type of shot: wide, medium-wide, medium, medium-tight, tight.
- Reel:** An auto-entry text field with the assigned number of the videotape containing the original footage.
- In, Out:** Text fields for the in and out points of a shot, in minutes and seconds.
- New In, New Out:** Calculated fields, based on the in and out points, formatted in SMPTE time code (hours:minutes:seconds:frames) for transfer to Adobe Premiere.
- Record #:** An auto-entry text field for numbering each new record—useful for finding clips quickly when your database gets large.
- File Name:** A calculated field that combines the information of topic, talent, and record number for easier identification in Premiere.
- Card:** A check box that indicates whether a record should be printed out as an index card.
- Use:** A check box that indicates whether a clip should be captured in Premiere.

Some fields have special functions, such as auto-entry or calculation. Auto-entry simplifies your logging task by entering repetitive data automatically. To establish auto-entry for the Talent, Reel, and Record # fields, click on each field name, one at a time, in the Define Fields dialog box, and then click on the Options button. For Reel and Talent, click on the Data check box in the Entry Options dialog box and enter the appropriate value in the text box. Enter the Reel value as a two-digit number (for example, 02 instead of 2)—this will come in handy in a later step. Change the Talent and Reel fields' auto-entry values when you switch tapes.

For Record #, click on the Serial Number check box in the Entry Options dialog box, and enter the number 1 in both the Next Value and Increment By text boxes. This will automatically increase the value in the Record # field by the defined increment for each new record you create. Do this before you create any records, or you will encounter problems later.

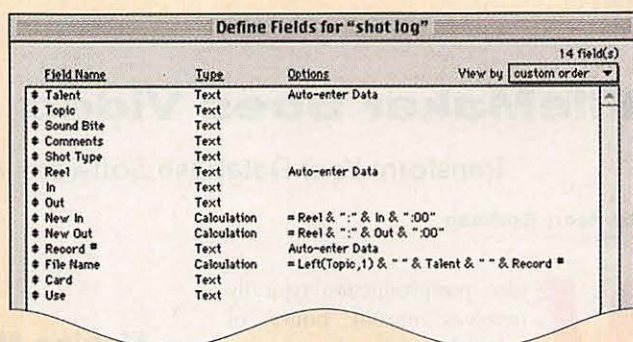
continues

Step 1: Define Your Database Fields (continued)

The calculated fields (New In, New Out, and File Name) are constructed automatically from data in other fields. New In and New Out are based on the In and Out fields; it's easier when logging clips to just enter minutes and seconds, but Premiere wants hours:minutes:seconds:frames. If you use one-hour tapes, you can use the two-digit reel number for "hours." The formulas shown at right in "Define Fields" combine the reel number with values in the In and Out fields, followed by "00" for frames.

The formula in File Name strings together the first letter of the Topic field with the data in the Talent and Record # fields. This makes the files sort automatically by topic when saved.

To define a calculated field, click on the Calculation radio button in the Define Fields dialog box when creating the field. In the Specify Calculation dialog box, enter the formula for the text string you want to create, or construct a formula by clicking on field names and operators. When you're finished, click on OK.

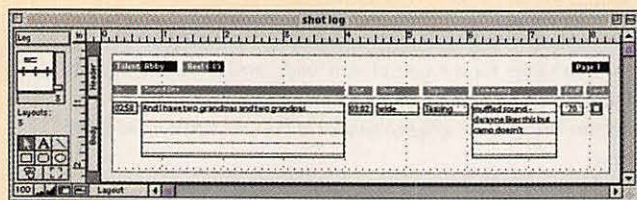


Define Fields This is the birthplace of your video-clip database. Some fields are enhanced with functions such as auto-entry, or are calculated with simple formulas that pull data from other fields.

Step 2: Log and Select Clips

Now create a Log layout for logging your tapes. Select Layout from FileMaker's Mode menu, and drag the fields into a natural sequence according to how you'll enter information while transcribing the tapes. Drag the Talent and Reel fields into the layout header to save space when the log is printed.

To create a pop-up list for Topic, click on the field in the Log layout and select Field Format from the Format menu. In the Style section of the Field Format dialog box, click on the lower radio button, and select Pop-up List from the left pop-up menu and Define



Log Layout This simple layout is used for creating a printed log of the clips you transcribe. You'll use the printed version for making your first cuts.

Value Lists from the right menu. In the Define Value Lists dialog box, enter a name for the list and click on Create. Then click on the Use Custom Values radio button and enter a list of topic names in the text box. Use the same procedure to create a pop-up list for the Shot Type field.

To create the check box in the Card field, click on the field in the Log layout and select Field Format from the Format menu. In the Style section of the Field Format dialog box, click on the lower radio button, and select Check Boxes from the left pop-up menu and Define Value Lists from the right menu. In the Define Value Lists dialog box, name the list and enter "Yes" as the sole value in the list. "Yes" will show up in your layout, but you can resize the field so that only the check box shows. You'll assign this same value list to the Use check box in the Index Card layout in step 3.

Now start logging tapes. Run through your video and log each clip of interest in its own record in the Log layout in Browse mode. When you're done, print out and review the clip log, and check the Card check box for each clip you want to consider using. Don't forget to also check this box in the electronic records in FileMaker.

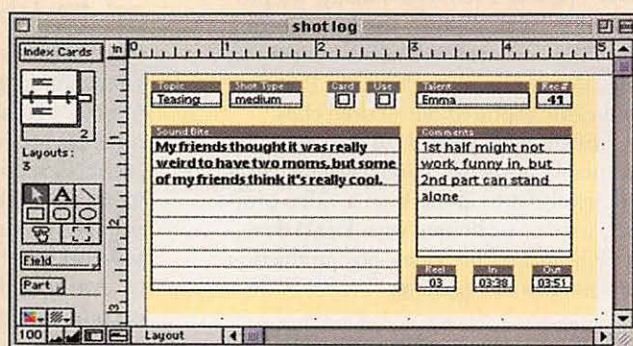
Step 3: Print Index Cards and Select Clips

Next you'll print each selected clip's information on a 3-by-5-inch index card. Create an Index Card layout in FileMaker by choosing Layout from the Mode menu, typing ⌘-N, and arranging the fields (you don't need New In, New Out, or File Name). Turn on Ruler Lines via FileMaker's Show menu to ensure that everything will fit.

Now you're ready to print. Print one topic at a time and use different-colored index cards for each topic to distinguish them at a glance. In Browse mode, select the Index Card layout and choose Find from the Mode menu. Click on the Card check box (to find only records that have this box checked) and select a topic from the Topic pop-up menu. Then click on Find.

Place a pile of index cards in your printer and print. Experiment with FileMaker's Page Setup command and your printer's input tray to get them to align. Repeat this procedure for each topic.

Once you've printed the cards, spread them on the floor,



Index Card Layout Printing clip information on 3-by-5 index cards is handy for making more cuts and experimenting with sequences.

Step 3: Print Index Cards and Select Clips (continued)

determine which clips are keepers and which are the maybes, and play around with different sequences. Pull out the cards for clips you want to capture, and check their Use check box. Don't forget to check the Use check box on each corresponding database record.

Step 4: Export Your Batch-Capture List

Now you're ready to export data for Premiere. Much of the work has already been done by the calculation fields from step 1.

TIP Create an Export layout if you want to double-check that the information is complete and properly formatted before exporting.)

First, do a Find and Sort. In Browse mode, select the Index Card layout and choose Find from the Mode menu. Then click on the Use check box and click on Find—this finds all records you've marked for capture. Now sort these records using the New In field as your sort index. This puts the clips in order by reel number and, more important, by In point on each reel, which eliminates shuttling back and forth on a tape during capture.

Next, select Export Records from the File menu's Import/Export submenu. In the resulting dialog box, give the export file a name, select Tab-Separated Text from the Type pop-up menu, and click on Save. In the Export Field Order dialog box, select (in order) Reel, New In, New Out, File Name, and Shot Type from the left-

TIP To find the records you want to mark, sort the database using the Record # field as the index. Note that you can't rely on the numbers in FileMaker's page flipper for finding records; every time you find or sort records, these numbers can change.

hand list and click on the Move button to move each to the right-hand list. Then click on Export. Open the text file to make sure the fields are in order. Reorder them if needed.



Export Layout Create a new layout to double-check that the information to be exported is complete and properly formatted.

Step 5: Import Your List into Premiere

After you create a project file in Premiere and set your audio- and video-capture parameters, select Batch Capture from Premiere's File menu's Capture submenu. In the Batch Capture window, select Import/Export Settings from the Batch Capture menu. In the Import/Export File Layout dialog box, make sure the boxes are in this order: Reel, New In, New Out, File Name, and Shot Type. This is very important—if they're out of order,

drag the names in the dialog box to rearrange them.

It's particularly important that New In, New Out, and File Name be in the right locations for the corresponding fields in Premiere. Premiere's Reel Name and Comment fields, however, are arbitrary text fields. I exported the Reel # field from FileMaker for use in Premiere's Reel Name field, and Shot Type from FileMaker to go into Premiere's Comment field. You may prefer to export different information for these fields. Once the field order is set, click on OK.

Next, select Import From Text File from the Batch Capture menu. In the File dialog box, select the text file you exported from FileMaker in step 4 and click on Open. Voilà! Your Batch List, which will look like the one at left, is now ready to go.

You'll notice extra fields in the Batch List: Duration is a calculation of each clip's length, based on the in and out points; Settings matters only if you want to use different capture parameters (resolution, frame rate, and so on) for different clips. To do this, you'll need to create and save a settings file for each unique combination of parameters, and attach the appropriate files to the desired clips. All other clips will be captured using Premiere's global settings.



Batch List The result of your earlier weeding efforts, this list tells Premiere exactly what clips to capture—a triumph of economy.

Step 6: Capture Your Clips

It's a piece of cake. Open your batch list and click on the Capture button—Premiere does the rest. All you have to do is insert the appropriate videotape into your playback deck when Premiere prompts you. Premiere will capture each clip, create a file for it, and save it to disk with the name you specified.

TIP Since you logged your clips to the nearest second, pad

them a bit during capture to prevent cutting off the beginning or end of a word in a sound bite. To do this, before you click on the Capture button, select Handles from the Batch Capture menu. In the Capture Handles dialog box, specify how many extra frames you want to capture on either side of your clip. I'd recommend 60 frames—2 seconds' worth.

NEW!
SPECIAL EDITORIAL
SECTION!



Macworld's Ultimate Gaming Guide

Attention, all Mac gamers!

Macworld is bringing you complete and in-depth coverage of Mac games and more—just in time for your holiday gift giving (or getting!). Macworld's special gaming coverage will provide all Mac gamers, from novice to expert, with the quintessential "how to" for building the perfect gaming machine.

December:

December features multiplayer gaming. Get yourself set up to play a game head-to-head, over an office network, or over the Internet.



Macworld editors share their hints and tips for playing popular multiplayer games and the "rules of engagement"—online gaming

etiquette. In Game Room it's the notorious Game Hall of Shame! Macworld will look at some notable promises that game vendors have broken—including products that never shipped for the Mac and products that didn't live up to their hype.

January:

January will feature 3-D graphics—a lab-based feature testing the latest crop of 3-D accelerators. In Game Room a Macworld editor attempts to play PC games on a Mac (the heartache and headache!)

February:

February will feature the official Game Guide—a comprehensive round-up of currently shipping mac games. And in Game Room you will find sneak peaks of soon-to-ship games we can't wait to play!



Don't miss out on a single issue! Don't miss out on any of the fun!

Attention Marketers!

Find out how "Macworld's Ultimate Gaming Guide" can work for you! Call your local Macworld representative TODAY! Or call Steve Plevin at 415-243-3509.

ANNUAL COVER PRICE	YOUR PROFESSIONAL ONE-YEAR RATE	BONUS STATUS
\$95.88	\$34.97	MACWORLD CLIP ART CD-ROM

As a Macintosh professional, you're entitled to a reduced rate on Macworld. Return this form now to get complete Mac OS coverage, and save up to 74% off the newsstand price. BONUS: MACWORLD CLIP ART CD-ROM -- FREE with your paid subscription.

Check one: ☐ 1 year (12 issues) for \$34.97 — **SAVE 64%** ☐ 2 years (24 issues) for \$49.97 — **SAVE 74%**

Name _____ (Please Print) _____ 4SND9

Company _____

Address _____

City _____

State _____

Zip _____

REPLY REQUESTED

☐ Payment enclosed. ☐ Bill me later.

RETURN THIS FORM TO GUARANTEE SAVINGS.

Annual newsstand price \$95.88. Non US-orders, please add US\$20 postage; Canadian GST included. Your FREE CD-ROM will be shipped upon payment.

Check us out on the Web —
<http://www.macworld.com>



NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

BUSINESS REPLY MAIL

FIRST-CLASS MAIL PERMIT NO. 66 BOULDER, CO

POSTAGE WILL BE PAID BY ADDRESSEE

Macworld®

Subscription Department
PO Box 54506
Boulder CO 80323-4506



Say you saw it in Macworld. To purchase products advertised in this issue call the phone numbers below or log onto Macworld GetInfo at www.macworld.com/getinfo for FREE product information.

Page No.	Advertiser	getinfo	Phone	Page No.	Advertiser	getinfo	Phone	Page No.	Advertiser	getinfo	Phone
61	3Com	—	—	56	Hire Knowledge	207	800/937-3622	30	Micromat	46	800/829-6227
8	AEC Software	203	800/450-1982	IBC	INFOWAVE	32	800/564-0644	59	Microtek Lab, Inc.	—	800/654-4160
62	AGIO DESIGNS	265	800/688-2446	60	Interland, Inc.	10	800/599-0547	7	Mitsubishi Electronics America, Inc.	261	800/843-2515
54	ALSOFT	140	800-257-6381	45	Iomega	103	415/781-3400	55	Mitsubishi Electronics America, Inc.	87	800/843-2515
57	American Power Conversion	72	888-289-APCC	9	IXMICRO	53	888/467-8282	49	MULTI-AD SERVICES	187	—
6	ANTHRO	—	800/325-3841	152	J&R Computerworld	282	800/221-8180	93	National Association of Photoshop Professionals	94	800/738-8513
40A	Apple	—	—	BC	Kensington	1	800/535-4242	51	NEC Technologies	16	800/NECINFO
150	APS Technologies	62	—	IFC,1	La Cie	—	—	17	Newer Technology	55	316-943-0222
189	Aspyr Media	90	—	195	Linux World	—	—	63	Orange Micro	60	714/779-2772
53	ATI Technologies, Inc.	256	—	193	Logicware	89	888/564-4245	10	Orange Micro	33	714/779-2772
153	Bottom Line Distribution	221	800-990-5694	18-25	MacConnection	145	800-986-2304	191	Power Media	—	—
154,155	ClubMac	96	800/CLUBMAC	123-131	MacMall / Creative Computers	131	800/222-2808	149	ProDirect	135	800/524-9952
156	Computer Discount Warehouse	2	800-509-4239	107	MacSoft	27	800-229-2714	46	RealSoftware	93	512-292-9988
36,37	Connectix	192	800/950-5880	186	MacSoft	28	800-229-2714	11	RICOH	4	—
67	Corel Corporation	78	—	188	MacSoft	29	800-229-2714	68,69	Sega	—	—
35	Dataviz	102	800-270-0030	95	MacSoft	30	800-229-2714	151	The LLB Company	220	800/848-8967
12,13	Deneba Software	57	800-733-6322	102	MacSoft	31	800-229-2714	140-147	THE MAC ZONE	71	800/436-0606
26	Diehl Graphsoft	46	410-290-5114	132-139	MacWarehouse	150	434-3035	14	ViewSonic	59	800/888-8583
58	Earthlink Network	—	888-EARTHLINK	96-101	The Mac Zone	—	800/645-EXPO	28,29	Vimage	44	877/4VIMAGE
42,43	Epson America, Inc.	—	800/BUYEPSON	148	MegaHaus	229	800/786-1184	64	VST Technologies	77	508/263-9700
65	Fujitsu Computer Products of America	—	800/626-4686	108	MetaCreations Corp.	5	800/846-0111	47	XANTÉ Corporation	112	800-926-8839
4,5	GCC Technologies	43	800-422-7777								

Macworld

Product Index

A quick and easy product index from Macworld. Simply use this index to find the page or advertiser of the products which interest you. Then log onto GetInfo at www.macworld.com/getinfo to request more information. You can choose to have the information delivered too you by e-mail, postal mail or telephone.

Page No.	Advertiser	getinfo	Page No.	Advertiser	getinfo	Page No.	Advertiser	getinfo	Page No.	Advertiser	getinfo
SOFTWARE			UTILITIES			EXPANSIONS/UPGRADES			MAIL ORDER		
BUSINESS			54	ALSOFT	140	28,29	Vimage	44	150	APS Technologies	62
8	AEC Software	203	36,37	Connectix	192	HARD DISKS/STORAGE			153	Bottom Line Distribution	221
CAD/CAM			IBC	INFOWAVE	32	INPUT DEVICES			154,155	ClubMac	96
26	Diehl Graphsoft	46	30	Micromat	46	153	Bottom Line Distribution	221	156	Computer Discount Warehouse	2
COMMUNICATION			46	RealSoftware	93	65	Fujitsu Computer Products of America	—	152	J&R Computerworld	282
35	Dataviz	102	HARDWARE			45		103	18-25	MacConnection	145
ENTERTAINMENT			BOARDS			IFC,1	La Cie		123-131	MacMall / Creative Computers	131
189	Aspyr Media	90	53	ATI Technologies, Inc.	256	148	MegaHaus	229	132-139	MacWarehouse	150
193	Logicware	89	9	IXMICRO	53	149	ProDirect	135	148	MegaHaus	229
95	MacSoft	30	17	Newer Technology	55	MISCELLANEOUS			149	ProDirect	135
102	MacSoft	31	10	Orange Micro	33	57	American Power Conversion	72	151	The LLB Company	220
107	MacSoft	27	63	Orange Micro	60	11	RICOH	4	140-147	THE MAC ZONE	71
186	MacSoft	28	63	Orange Micro	60	MODEMS			ACCESSORIES		
188	MacSoft	29	28,29	Vimage	44	61	3Com	—	FURNITURE		
191	Power Media	—	COMPUTER SYSTEMS			PRINTERS			62	Agio Designs	265
68,69	Sega	—	40A	Apple	—	42,43	Epson America, Inc.	—	6	ANTHRO	—
GRAPHICS/DTP			150	APS Technologies	62	4,5	GCC Technologies	43	SERVICES		
67	Corel Corporation	78	154,155	ClubMac	96	11	RICOH	4	MISCELLANEOUS		
12,13	Deneba Software	57	DIGITIZERS/SCANNERS			47	XANTÉ Corporation	112	56	Hire Knowledge	207
IBC	INFOWAVE	32	59	Microtek Lab, Inc.	—	SECURITY			ON LINE		
108	MetaCreations Corp.	5	DISPLAY			57	American Power Conversion	72	58	Earthlink Network	—
49	MULTI-AD SERVICES	187	IFC,1	La Cie		TRADESHOWS/CONFERENCES			62	Interland, Inc	10
93	National Association of Photoshop Professionals	94	7	Mitsubishi Electronics America, Inc.	261	195	Linux World	—	DIRECTORY		
MISCELLANEOUS			55	Mitsubishi Electronics America, Inc.	87	96-101	The Mac Zone	—			
58	Earthlink Network	—	51	NEC Technologies	16						
			14	ViewSonic	59						

MacMall

The Mall With It All...For Less!

**MacMall
EXCLUSIVE!**

Mac Deal of the Century!
**FREE Scanner and
Extra 32MB RAM**
with iMac purchase!
See following page for details...



**233MHz
iMac™**
\$1,299
#37333
Low Lease Rate!
Only \$39.99/mo.

NEW Exclusive Offers with Purchase of Mac OS 8.5!

New Features Include:

Apple's new Sherlock technology—the fastest way to find whatever content you need—on your computer, or on the Web and you can select from three find options: Find File, Find By Content and Search Internet.

PowerPC native AppleScript—removes performance bottlenecks which means automated scripts can do their work in a fraction of the time.

Fastest sharing, copying and backup of files over a network—faster than on any other personal computer.

Increased system performance—with significantly more speed, more intelligence, enhanced stability and astounding ease-of-use.

Smart Scrolling—makes navigating within document and Finder windows faster and easier—documents automatically scroll as you drag a window's scroll box up and down its scroll bar.

More Key Features of NEW Mac OS 8.5

- ✓ Built-in Internet accessibility features
- ✓ Customizable user interface—change the look of your Macintosh desktop
- ✓ Compatibility with your existing applications
- ✓ Includes Microsoft Internet Explorer 4, Microsoft Outlook Express and Netscape Navigator

MacMall Exclusive Special Offers with your Mac OS 8.5 Purchase

Exclusive! \$10 Instant Rebate

when you purchase
Mac OS 8.5 from
MacMall.
Ask for #37231 and you
will get Mac OS 8.5
for only \$88.99



Regular price is \$98.99

Easy, Reliable Back up!

**Save
\$15**
**Retrospect Express
for only \$29.99**

when you purchase
Mac OS 8.5
Ask for #25096
Regular price is \$44.99 Product shipped in
promotional packaging.

FREE!

Flight Unlimited by Looking Glass
and **Fighter Wing** by Gemsoft
when you purchase
Mac OS 8.5. Ask for #37105
Fly both these highly
acclaimed, award-
winning simulations
to find out if
you have
what it
takes!

A
\$30
Value



\$2.99 S & H fee
applies. Product
shipped in promo-
tional packaging.

Mac OS 8.5

#37231	Mac OS 8.5 CD	\$88.99*
#36829	Mac OS 8.5 CD (10 User)	\$949

*Price reflects \$10 instant rebate from MacMall. Price before rebate is \$98.99
System req.: PowerPC (Apple PC Compatibility cards are not supported); 16MB RAM
(Virtual Memory set to at least 24MB); CD-ROM Drive

See more MacMall deals on the next 8 pages!

Order Any Time.
Open 24 Hours.

Order Today by 10pm EST—Get it Tomorrow by 10:30am.

1-800-217-9492

NEW iMac™!

The All-in-One Power-Packed Internet System for Your Home!

You've heard it a million times... "computers are hard to use and the operating systems aren't user-friendly." Then, came the

Macintosh®. Now the company that started the PC revolution is helping parents, kids and students take advantage of Internet evolution.

Introducing the iMac, the totally translucent computer that combines all the possibilities of the Internet with the magic of the Macintosh!

The Most Original Mac Since the Original Mac!

Key Features:

- 233MHz PowerPC G3 processor
- 512K backside Level 2 cache
- 4GB IDE Hard Drive
- 66MHz system bus
- 32MB of RAM (exp. to 128MB)
- 24X CD-ROM drive
- Built-in 10/100BASE-T Ethernet
- Built-in 56K modem
- 15-inch (13.8-inch viewable) high quality display with 1024 x 768 resolution
- Incorporates a high-quality monitor with minimal flicker and crystal-clear image
- Two 12Mbps Universal Serial Bus (USB) ports which support USB devices such as printers, storage devices and hubs
- One 4Mbps Infrared (IrDA) port

Plus:

- 2MB SGRAM (exp. to 4MB)
- Built-in Stereo speakers w/SRS sound
- Includes 2D/3D graphics acceleration for outstanding multimedia capabilities
- Comes with a height-adjustable, space efficient keyboard
- Elegantly routes cables to avoid clutter and confusion

Also Includes:

- Mac OS 8.1, Microsoft Internet Explorer with Outlook Express 4.01, AppleWorks 5 (formerly ClarisWorks), Quicken Deluxe '98 from Intuit, FaxSTF from STF Technologies, MetaCreation's Kai's Photo Soap, MDK from InterPlay, Pangea Software's Nanosaur, Williams-Sonoma Guide to Good Cooking from Broderbund, and Earthlink's Total Access 2.01! Most software is pre-installed. Please call for details.

Additional Features:

- Like the original Mac, the iMac is totable. An integrated handle lets the 40-pound unit be easily moved and offers a place to thread a security cable.

Plus, you get ALL these titles with your iMac!



Most software comes pre-installed. Call for details.

- As with Apple's recent all-in-one education Macs, a handy rear door allows easy access to a slide-out chassis housing both the main logic board (and its RAM-and-processor daughtercard) and storage devices.

FREE With Any MAC Purchase



Return to Zork/Black Throne

\$2.99 shipping & handling.
Shipped in promotional packaging.
Ask for #33452

Compton's Interactive Encyclopedia '98

For the most comprehensive up-to-date information.
\$3.99 shipping & handling.
Ask for #36119

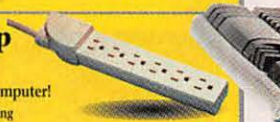


CyberStudio 3.0

Everything you need to design, produce & maintain fully dynamic Web sites!
Ask for #31768

Surge Strip by Belkin

A must for every computer!
\$3.99 shipping & handling
Ask for #98675



Order Any Time!
Open 24 Hours. **1-800-217-9492**
Order Today by 10pm EST—Get it Tomorrow by 10:30am.

Get Yours Today

Premier Edition

Introducing the **All New Mac Software Buyer's Guide!**

Call For Yours Today!
1-888-425-MALL
Visit our Online catalog at software.macmall.com



Over 1,200 titles!

MACMALL EXCLUSIVE!
Only MacMall Gives you **Both FREE!**

Free* Extra 32MB RAM

Free Microtek Scanner!

*30 installation fee applies with your iMac™

The iMac is totable! A convenient handle lets the 40lb. unit be easily moved.

The 15" shadow-mask monitor features quick refresh rates—117Hz at standard resolution—to reduce flicker.

The keyboard offers two USB ports (one for the mouse) and a USB hub to allow daisy-chained devices.



NEW Apple® iMac™ only
\$1,299!

#34188

Exclusive Low lease rate. Only \$39⁹⁹/Month!
*30 installation fee applies.

HOT NEW USB PERIPHERALS FOR YOUR iMAC™!

SlimScan C3 USB for the iMac™

A \$79 Value

FREE*

w/ your iMac purchase

➤ 36-bit color

➤ 300 x 600dpi

Ask for item #36980

*Free after mail-in and instant rebates.

Rebates valid through 11/30/98. While supplies last.

MICROTEK

MACMALL EXCLUSIVE!

FREE!

with iMac™ purchase



Stylus Color 600 USB Printer

MACMALL EXCLUSIVE!

➤ 1440 X 720dpi

➤ 6ppm black

➤ 4ppm color

Includes USB cable

\$99⁹⁹

\$90 Savings!

w/ iMac purchase! #36058

Factory refurbished. 2 year warranty.



NEW! uConnect

Immediately enables your Macintosh PDAs, printers, digital cameras, graphic tablets and other serial devices to use the iMac's new USB ports.



\$59⁹⁹

#34336

with your iMac Purchase. Reg. Price is \$84" (#34334).

SuperDisk 120MB Drive for the iMac™

Reads & writes 120MB SuperDisk diskettes. Reads and writes standard HD 3.5" diskettes—in both Macintosh & PC formats!

\$149⁹⁹

#33844

Includes One 120MB disk.



macally

iHub 4-Port USB Hub

Quickly and easily add USB peripheral devices like a printer, scanner, joystick and more!

\$49⁹⁹

#36700

#31460 USB 4-Port Hub (beige)

\$39⁹⁹

BUY FROM THE BEST!

- ✓ Fastest Overnight Delivery. Order Until 10pm—Get It Tomorrow By 10:30am!
- ✓ Over 45,000 Products!
- ✓ \$1.8 Billion In Available Inventory!
- ✓ Open Accounts and Leasing!
- ✓ Custom Configuration!
- ✓ Volume Discounts!
- ✓ 1st Apple Authorized Catalog Reseller

See our Web site for more deals!
savebig.macmall.com

Mention your Priority Source Code: #ZMWD8C1

MacMall
The Mall With It All...For Less!

FREE SHIPPING!

**4 NEW
MODELS**

Features a high quality display—up to 14.1" diagonal.

Apple®
Macintosh®
PowerBook™ G3
Starting at

\$2,299!

#36951
Or Lease for \$92 per month

New!

Storage will never
be an issue with up to
8GB hard drive space!

up to **300MHz**

The New G3 PowerBooks... Out-Perform Desktop Systems!

Stellar Features at an Affordable Price!

Processor and Memory

- 233, 266 or 300MHz PowerPC G3 processor—fastest performance ever in a notebook!
- 66MHz system bus speed
- Integrated floating point unit and 64K on-chip Level 1 cache (32K for data and 32K for instruction)
- 32 or 64MB RAM; 2 SO-DIMM slots support up to 192MB RAM; 4MB ROM

Storage

- 2, 4 or 8GB IDE hard drive
- 20X CD-ROM drive for use in expansion bay

Expansion & Networking Ports

- Two hot-swappable expansion bays
- ADB port, SCSI port, Serial port
- Built-in 10BASE-T Ethernet
- RJ-11 modem port, 4Mbps Infrared (IrDA) port
- PC Card Slots for two Type I, Type II or one Type III PC Card

Graphics, Video & Sound

- Features high-quality display, up to 14.1 inches (diagonal)
- 2MB or 4MB SGRAM video memory
- Up to 14.1 inch (diagonal) displays features built-in TFT XGA active matrix display, supporting millions of colors at 1024 x 768 pixel resolution

- 2D/3D graphics, through integrated video controller
- S-video output for connecting to a TV
- 16-bit CD quality stereo input/output
- Two built-in stereo speakers

Portability

- Includes one Lithium-ion battery for up to 3.5 hours of normal use; supports two batteries for as much as 7 hours of use

Software

- Mac OS 8.1 which includes Internet access software, FAXStf, Now Contact & Up-to-Date, and WebWhacker

Order Any Time.
Open 24 Hours. **1-800-217-9492**
Order Today by 10pm EST—Get it Tomorrow by 10:30am.

on ANY Mac Desktop, Mini-Tower or PowerBook!

Free UPS Ground shipping applies to actual desktop,
Mini-Tower or PowerBook only and not to other items
shipped on the same invoice. Sorry, iMac not included!



Authorized
Catalog Reseller

Why a G3?

Designed to be as attractive as it is functional!

Sleek ergonomics for more efficiency

Flip up keyboard gives easy access to
RAM expansion slot & removable hard disk drive

New, more flexible configuration options!



4 NEW Models Available! Choose Your Ideal G3!

Order	Speed	RAM	HD	CD-ROM	Modem	Display	Weight	Was	Now	Or Lease
NEW										
#36951	233MHz	32MB	4GB	20X	56K	12.1" Active matrix	7.8lbs.	—	\$2,299	\$92/mo
NEW										
#36303	233MHz	32MB	2GB	20X	56K	14.1" Active matrix	7.8lbs.	—	\$2,799	\$112/mo
NEW										
#36304	266MHz	64MB	4GB	20X	56K	14.1" Active matrix	7.8lbs.	—	\$3,499	\$140/mo
NEW										
#36306	300MHz	64MB	8GB	DVD	56K	14.1" Active matrix	7.8lbs.	—	\$4,999	\$200/mo
#31414	Apple Floppy disk drive			\$99 ⁹⁹						

Add these Items to Your Order!

PowerBook G3 Accessories

Make your PowerBook G3
totally portable with these
name-brand accessories!

#31413	Apple AC Adapter	\$74 ⁹⁹
#31414	Apple Floppy disk drive	\$99 ⁹⁹
#31873	VST Charger for PowerBook G3	\$149 ⁹⁹
#31412	Apple Lithium-ion battery	\$199 ⁹⁹
#33200	IX Micro Road Rocket 128-bit Video card for PB G3	\$289 ⁹⁹
#34062	Apple DVD-Video Kit	\$499 ⁹⁹

Internal Zip® for Your PowerBook!

Faster than desktop Zip
drives—no cables or
batteries required!



#31872	Zip Drive for PowerBook G3	\$239 ⁹⁹
--------	----------------------------	---------------------

56K PC Card Modem

Comes with games and drivers
for both Mac and PC on the FREE
Get Connected CD.

FREE V.90
Upgrade!



#31148	56K PC Card Modem for Mac	\$79 ⁹⁹
--------	---------------------------	--------------------



DON'T FORGET MEMORY!
Upgrade your G3

#31437	16MB PowerBook G3 Series	\$35 ⁹⁹
#31438	32MB PowerBook G3 Series	\$75 ⁹⁹
#31440	64MB PowerBook G3 Series	\$129 ⁹⁹
#31442	128MB PowerBook G3 Series	\$269 ⁹⁹

Have your RAM professionally installed by one of our
factory-trained technicians, for only \$30. Ask for #2214.

Price War III!

**Purchase any Mac®
and take your pick!**

MacMall offers you the choice
of any one of the 3 promotions

✓ Up to 64MB RAM FREE!

32MB FREE with any
CPU in this catalog priced
between \$1,299 - \$2,299

64MB FREE with any
CPU in this catalog priced
\$2,300 and above

\$30 Installation fee applies

✓ MacMall's Exclusive Instant Cash Back!

\$50 OFF

All products in this catalog priced
between \$1,299 - \$2,299

\$100 OFF

All products in this catalog priced
between \$2,300 - \$2,499

\$150 OFF

All products in this catalog priced
between \$2,500 - \$2,999

\$200 OFF

All products in this catalog priced
between \$3,000 - \$3,499

\$250 OFF

All products in this catalog priced
between \$3,500 and up

No coupons to mail in. No checks to wait for. Just instant savings! Best of
all, there is no limit—so order as many times you want...and keep saving.

Epson Stylus Color 600 Printer Blowout!

Up to \$90 in Savings!

\$99⁹⁹*

EPSON

- Up to 1440 x 720dpi
- 6ppm black, 4ppm color
- Built-in Photo Printing

w/Mac purchase! #36133

includes USB cable



*Price with CPU purchase. Regular price \$149.

Factory refurbished. 2 Year Warranty. While supplies last.

As Always... FREE Shipping!
**We'll Beat Any Price on
Any Computer!**

**We'll Beat ANY Advertised
Price on any Computer in stock!**
**We'll beat any price on any Mac®
or PowerBook from any authorized
Apple® catalog reseller, retail store,
online store or apple.com!**

*"We'll beat any price" offer refers to any authorized Apple
Catalog reseller, Retail store, Online Store or apple.com.
Total rebates vary by machine and configuration. Call for
complete details.

We do our best to be accurate but occasionally mistakes
occur. We are not responsible for any typographical, photo-
graphic or technical errors. Products and packaging may
differ from stock available at time of shipment; we reserve
the right to substitute equivalent items.

See our Web site for more deals!
savebig.macmall.com

Mention your Priority Source Code: #ZMWD8C1

MacMall

The Mall With It All...For Less!

FREE SHIPPING!

Apple®
Power Mac™ G3
Desktops Starting at
\$1,599!

#36295
Or Lease for \$64 per month

up to **333MHz**

Three standard 12" PCI slots
for easy expansion of system
functionality.

Monitor sold separately
on all models.

Next Generation Power Mac G3... for Performance & Expandability!

Innovative Features at an Affordable Price!

Processor and Memory

- 266, 300 or 333MHz PowerPC G3 processor
- 512K or 1MB Backside Level 2 Cache
- 133, 150 or 167MHz dedicated 64-bit backside bus
- 66MHz system bus
- Integrated floating point unit and 64K on-chip Level 1 Cache (32K data/32K instruction)
- 32, 64 or 128MB SDRAM (3 DIMM Slots support up to 768MB)
- 64-bit memory bus

Storage

- 4, 6, 8 or 9GB IDE or SCSI hard drive
- 24X CD-ROM drive (#36595 & #36954 come with a DVD-ROM Drive)
- 1.44MB Floppy Disk Drive
- Iomega Zip 100MB SCSI Drive (select models)

Expansion Options

- Three PCI expansion slots
- One or two 5.25" SCSI expansion bay

Networking Ports

- Two high-speed DMA serial ports
- Internal/External SCSI bus

ADB port

- Built-in 10BASE-T Ethernet connector; 10/100BASE-T Fast Ethernet card (select models)

Graphics, Video & Sound

- 2 or 6MB SGRAM (exp. to 6MB)
- Built-in 64-bit graphics and multimedia accelerator
- 128-bit 2D/3D graphics PCI card w/8MB EDO VRAM (select models)
- 16-bit stereo quality audio I/O

Software

- Mac OS 8.1

Order Any Time.
Open 24 Hours.

1-800-217-9492
Order Today by 10pm EST—Get it Tomorrow by 10:30am.

on ANY Mac Desktop, Mini-Tower or PowerBook!

Free UPS Ground shipping applies to actual desktop,
Mini-Tower or PowerBook only and not to other items
shipped on the same invoice. Sorry, iMac not included!



Why a G3?

Innovative System Architecture!

New, more efficient logic board design

Increased system bus speed to maximize processor performance

New, more flexible configuration options!



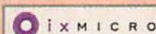
Choose the G3 That's Right for You!

#36295 NEW	Power Mac Desktop/266MHz/32MB RAM/512K cache/4GB IDE Hard Drive 24X CD-ROM/10BASE-T Ethernet	Or lease only \$1,599	\$64/mo
#36595 NEW	Power Mac Desktop/266MHz/64MB RAM/4GB Hard Drive DVD-ROM/56K Modem	only \$1,749	Or lease \$70/mo
#36954 NEW	Power Mac Desktop/300MHz/32MB RAM/4GB Hard Drive DVD-ROM	only \$1,999	Or lease \$80/mo
#36297 NEW	Power Mac Desktop/300MHz/64MB RAM/1MB cache/6GB IDE Hard Drive 24X CD-ROM/Built-in Zip® Drive/10BASE-T Ethernet	Or lease only \$1,999	\$80/mo
#36457 NEW	Power Mac Mini-Tower/300MHz/64MB RAM/1MB cache/8GB IDE Hard Drive 24X CD-ROM/Built-in Zip® Drive/6MB VRAM/10BASE-T Ethernet/A/V in & out	Or lease only \$2,399	\$96/mo
#36298 NEW	Power Mac Mini-Tower/333MHz/128MB RAM/1MB cache 9GB Ultra-Wide SCSI Hard Drive/24X CD-ROM/6MB VRAM/10BASE-T Ethernet	Or lease only \$2,999	\$120/mo

Add these Items to Your Order!



ix3D Ultimate Rez
128-bit 2D/3D/Video Graphics Accelerator
True 128-bit architecture for the ultimate in performance;
8MB EDO VRAM, 250MHz RAMDAC; supports resolution up
to 1920 x 1200; Optimized PCI bus; over \$650 of FREE bundled
software; including Ray Dream Studio 5 and Kai's Power Tools 3.
with any CPU, monitor or Adobe software order. Regular price \$499.99 #14733



only
\$199.99
#35351

Apple MultipleScan 720 17" Color Display

16" Viewable image;
.28mm dot pitch;
resolution up to
1280 X 1024 @ 60Hz;
cross-platform.

only
\$499.99

#16467 MultipleScan 720 display \$499.99



Price War III!

**Purchase any Mac®
and take your pick!**

MacMall offers you the choice
of any one of the 3 promotions

✓ Up to 64MB RAM FREE!
32MB FREE with any
CPU in this catalog priced
between \$1,299 - \$2,299

64MB FREE with any
CPU in this catalog priced
\$2,300 and above

\$30 Installation fee applies

**✓ MacMall's Exclusive
Instant Cash Back!**

\$50 OFF All products in this catalog priced
between \$1,299 - \$2,299

\$100 OFF All products in this catalog priced
between \$2,300 - \$2,499

\$150 OFF All products in this catalog priced
between \$2,500 - \$2,999

\$200 OFF All products in this catalog priced
between \$3,000 - \$3,499

\$250 OFF All products in this catalog priced
between \$3,500 and up

No coupons to mail in. No checks to wait for. Just instant savings! Best of
all, there is no limit—so order as many times you want...and keep saving.

Epson Stylus Color 600 Printer Blowout!

Up to \$90 in Savings!

\$99.99*

EPSON

- Up to 1440 x 720dpi
- 6ppm black, 4ppm color
- Built-in Photo Printing
- w/Mac purchase! #36133
- w/iMac purchase! #36058

includes USB cable

*Price with CPU purchase.
Regular price \$199.

Factory refurbished. 2 Year Warranty. While supplies last.

As Always... FREE Shipping!
**We'll Beat Any Price on
Any Computer!**

We'll Beat ANY Advertised
Price on any Computer in stock!
We'll beat any price on any Mac®
or PowerBook from any authorized
Apple® catalog reseller, retail store,
online store or apple.com!

*We'll beat any price" offer refers to any authorized Apple
Catalog reseller, Retail store, Online Store or apple.com.
Total relative value by machine and configuration. Call for
complete details.
We do our best to be accurate but occasionally mistakes
occur. We are not responsible for any typographical, photo-
graphic or technical errors. Products and packaging may
differ from stock available at time of shipment; we reserve
the right to substitute equivalent items.

See our Web site for more deals!
savebig.macmall.com

Mention your Priority Source Code: #ZMWD8C1

MacMall
The Mall With It All...For Less!

If You Don't See it,

Memory As low as \$175 per MB

For Power Mac G3 Series

#25730	16MB DIMM (10ns)	\$29 ⁹⁹
#25747	32MB DIMM (10ns)	\$49 ⁹⁹
#25750	64MB DIMM (10ns)	\$99 ⁹⁹
#25821	128MB DIMM (10ns)	\$199 ⁹⁹

For Power Mac 7200-7600/ 8500-8600/9500-9600 Series

#72646	16MB DIMM (60ns)	\$29 ⁹⁹
#72647	32MB DIMM (60ns)	\$45 ⁹⁹
#72648	64MB DIMM (60ns)	\$85 ⁹⁹

For Power Mac 4400 Series

#13936	16MB DIMM (60ns)	\$45 ⁹⁹
#13937	32MB DIMM (60ns)	\$79 ⁹⁹
#13938	64MB DIMM (60ns)	\$155 ⁹⁹

For Power Mac 6500 Series

#93961	16MB DIMM (60ns)	\$39 ⁹⁹
#93963	32MB DIMM (60ns)	\$49 ⁹⁹
#93964	64MB DIMM (60ns)	\$85 ⁹⁹

For Macintosh PowerBook G3 Series (non wallstreet)

#26311	32MB DIMM (60ns)	\$75 ⁹⁹
#26312	48MB DIMM (60ns)	\$109 ⁹⁹
#26313	64MB DIMM (60ns)	\$119 ⁹⁹
#26314	96MB DIMM (60ns)	\$169 ⁹⁹
#26315	128MB DIMM (60ns)	\$249 ⁹⁹



Why Choose Viking Memory?

24-7 Tech Support
Call 1-800-845-8777 24 hours a day, seven days a week
for all Viking Memory Products

Lifetime Warranty

Memory backed for as long as you own your computer.
If anything goes wrong, Viking will replace it.

For Power Mac G3 Series

#24574	16MB SDRAM DIMM	\$49 ⁹⁹
#24578	32MB SDRAM DIMM	\$65 ⁹⁹
#24579	64MB SDRAM DIMM	\$129 ⁹⁹
#24582	128MB SDRAM DIMM	\$249 ⁹⁹
#30270	256MB SDRAM DIMM	\$629 ⁹⁹

For Power Mac 7200-7600/ 8500-8600/9500-9600 Series

#97312	16MB DIMM (60ns)	\$39 ⁹⁹
#97217	32MB DIMM (60ns)	\$59 ⁹⁹
#79314	64MB DIMM (60ns)	\$109 ⁹⁹

For Power Mac 4400 Series

#90678	16MB EDO DIMM	\$49 ⁹⁹
#90679	32MB EDO DIMM	\$99 ⁹⁹
#90680	64MB EDO DIMM	\$159 ⁹⁹

For Macintosh PowerBook G3

#31437	16MB Module (10ns)	\$35 ⁹⁹
#31438	32MB Module (10ns)	\$75 ⁹⁹
#31440	64MB Module (10ns)	\$129 ⁹⁹
#31442	128MB Module (10ns)	\$269 ⁹⁹

HP ScanJet 5p Scanner

24-bit w/36-bit image processor;
300 optical; 1200dpi integrated
8.5" X 11.7"; Includes Photoshop
LE; Visioneer Paperport software.

only \$99⁹⁹

#89375

Special Offer!

While supplies last!



Princeton Ultra 17" Monitor!

15.8" viewable 1280 x 1024
Maximum resolution
.28mm dot pitch.

\$199⁹⁹

#33080

With any computer purchase.
Regular price \$229.
Ask for #33057.

Factory refurbished.
90 Day Warranty.
While supplies last!



Smart One 33.6 Data Fax Modem

\$29⁹⁹

#28937

BEST DATA
PRODUCTS, INC.

FREE!
Integrated
data/fax
software



Price reflects
\$20 mfr. mail-in
rebate. Offer
valid through
10/31/98.

Mavica MVC-FD81 Digital Camera

1024 X 768; 3X Optical zoom;
2.5" LCD; MPEG video recording
Floppy disk storage.

only

\$799⁹⁹

#35603

SONY



ix3D Ultimate Rez 128-bit 2D/3D/Video Graphics Accelerator

True 128-bit architecture for the
Ultimate in performance; 8MB EDO
VRAM, 250MHz RAMDAC; Supports
resolution up to 1920 x 1200; Optimized
PCI bus Over 650 of FREE bundled
software including Ray Dream Studio 5
and Kais Power Tools 3.

\$199⁹⁹

#35351

With any CPU,
monitor or Adobe
software order.
Regular price \$499.99 #14733.



SupraExpress 56K Speaker Phone Modem External

While supplies last!

only

\$69⁹⁹

#93567

Price reflects
\$50 mfr.
mail-in rebate.
Offer valid
through 12/31/98.



Sony CD Recordable Disc

650MB, 74 min.

as low as

49¢ ea.

#14452

After \$20 mail-in rebate
when purchased
in qty. of 10.

SONY



12X External CD-ROM Drive

100ms access rate;
128K cache; durable,
cooled case.

\$109⁹⁹

#23968



Crescendo G3 Upgrade

for Power Mac 6100,
7100 and 8100 series
215-225MHz; 512k cache
2:1 Backside cache.

\$499⁹⁹

#31684



Stylus Color 800 Printer

1440 X 720dpi;
8ppm black;
7ppm color.

\$189⁹⁹

#33727

Factory Refurbished.

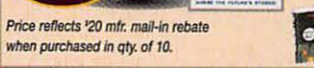


Fuji 10-Pack Zip® 100MB Disks

as low as
\$8⁹⁹ ea.

#88261

Price reflects \$20 mfr. mail-in rebate
when purchased in qty. of 10.



Jaz® 1GB External SCSI Drive

\$199⁹⁹

#15813

6.6MB/sec.
transfer rate
Includes 1GB Disk.

Factory Refurbished. 1 year warranty.

Stock up on Jaz Cartridges: #74545

1-2	3-5	6+
\$99 ⁹⁹	\$89 ⁹⁹	Call



Imega® ZipPlus™ 100MB External SCSI/Parallel Drive

only \$99⁹⁹

Includes
100MB
Disk!

With purchase of 10-pack Zip Disks.
Ask for #36876. Regular price \$109⁹⁹ (#36821).

Factory refurbished. 1 year warranty.



HP LaserJet 6Lse Printer

Up to 5ppm, 600 x 600dpi
resolution; Includes Mac
printer software & cable
1MB memory;
Durable 6000
pages/month duty cycle

\$469⁹⁹

#96238



Order Any Time.

Open 24 Hours.

Order Today by 10pm EST—Get it Tomorrow by 10:30am.

1-800-217-9492

Call Us!

Premier Edition

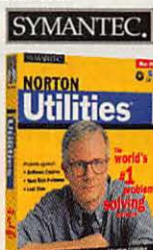
Norton Utilities 4.0

The #1 selling utility for the Mac.

Upgrade for Only

\$44⁹⁹

Price reflects \$50 mfr. mail-in upgrade rebate for previous users.



Norton AntiVirus 5.0

(formerly SAM 4.5)
Upgrade for Only

\$24⁹⁹

#28475
Price reflects \$40 upgrade/crossgrade rebate. Price before rebate is \$64.



MacLink Plus Deluxe 10.0

With any NEW Power Mac G3 CPU purchase.

Now \$57⁹⁹

#34158
Reg. Price is \$97.99



Introducing the **All New Mac Software Buyer's Guide!**

Call For Yours Today!
1-888-425-MALL
Visit our Online catalog at software.macmall.com



NEWEST SOFTWARE DEALS!

New! Painter 5.5
New Web Edition!
Upgrade for Only \$74⁹⁹
#35399

Adobe Premiere 5.0
Professional digital video editing tool.
Upgrade for Only \$179⁹⁹
#30887

Adobe Acrobat 3.0.1
The standard for document distribution on the Web.
\$184⁹⁹
#99375

CorelDRAW 8
Competitive upgrade for Only **\$99⁹⁹**
#33817
Price reflects \$50 mfr. mail-in upgrade rebate

We do our best to be accurate but occasionally mistakes occur. We are not responsible for any typographical, photographic or technical errors. Products and packaging may differ from stock available at time of shipment. We reserve the right to substitute equivalent items.



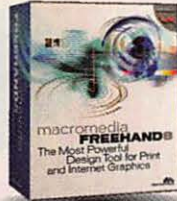
FreeHand 8

Upgrade for Only

\$139⁹⁹

#27424

FreeHand 8 Design in Motion Suite also available. Call for details!

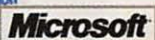


Microsoft Office 98

for Only

\$258⁹⁹

#26155
Ask your Account Manager about special offers with purchase.



Extreme Mac 12-Pack

by StarPlay

12 block buster games all together at one extremely low price.

for Only \$39⁹⁹

#33862



Retrospect Express

Easy and reliable backup optimized for removable drives!
for Only \$44⁹⁹
#32924



QuarkXPress 4.0

The print & publishing standard!

for Only \$694⁹⁹

#23098



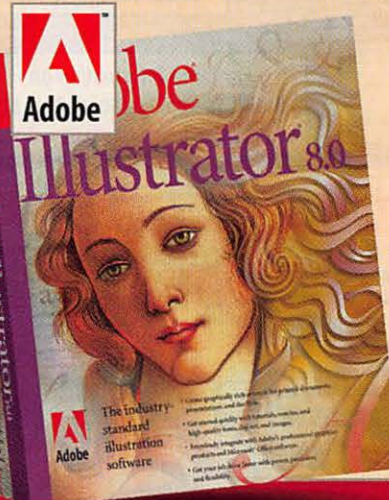
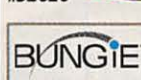
Myth II SoulBlighter

Greater realism and dazzling special effects!

for Only \$49⁹⁹

#32620

New!

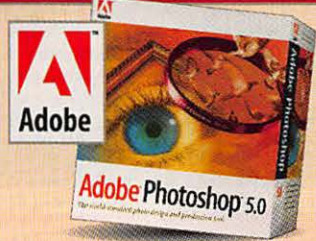


NEW! Adobe Illustrator 8

Illustrator 8.0 is one of the most innovative releases in Adobe's history. Upgrade today! Includes FREE Photographic Edges IV (\$149 value)

\$119⁹⁹

Upgrade CD Power Mac #34389



Adobe Photoshop 5.0

Includes new features like multiple undo, editable text, ColorSync support, Spot colors, new selection tools and more!

Upgrade for Only \$179⁹⁹

#30885 Upgrade CD Power Mac

See our Web site for more deals!
savebig.macmall.com

Mention your Priority Source Code: #ZMWD8C1

MacMall

The Mall With It All...For Less!



Authorized
Catalog Reseller

MacWAREHOUSE

FREE Instant 64MB RAM

Apple • Imation • Asanté • Hewlett-Packard • MacSoft • MetaCreations • Grolie

IMATION iMac SuperDisk USB Drive

Only
\$149.95!
DRI2793

- 120MB capacity
 - USB interface for easy plug and play, hot-swappable storage
 - Reads and writes 3.5" diskettes
- iMac LS-120MB SuperDisks (5-pack), only \$64.99. Ask for item # ME7827.



AsantéTalk 10-T iMac LocalTalk Bridge

Only
\$99.99!
DEP1733

- Ideal for moving files from your existing LocalTalk Macs to your iMac or printing to LocalTalk supported printers.
- Simply plug and play



HP DeskJet 697C Color Printer

Only
\$249!
BN5686

- Resolution: 600 x 600dpi black 600 x 300dpi color
- Prints 5ppm black/1.7ppm color.



NEW! UMAX Astra 1220u Duo Color Scanner

Only
\$129.95!
after rebate
IN7260

- 36-bit color images
- USB interface
- 600 x 1200dpi resolution



*Price after mfr's \$20 mail-in rebate. Price before rebate is \$149.95. Ask for rebate coupon # AA1203. HURRY! Offer expires 10/31/98!

USB Cabling Solutions

Only
\$99.99!
DEH3808

- Express BUS Hub: easily attach up to 127 printers, scanners, digital cameras and modems to your iMac.



Express BUS Hub: DEH3808, \$99.99.

PAGE 1 OF 8

Now shipping!

Equipped with the new
PowerPC G3!
Furiously-Fast Processor
233MHz

- 233MHz PowerPC G3 Processor
- 32MB RAM (128MB max.)
- Built-in 15" Color Monitor
- 512K Backside Level 2 Cache
- 4.0GB Hard Drive
- Built-in 24X CD-ROM Drive
- Built-in 56Kbps Fax/modem
- 2MB of Video RAM (6MB max.)
- 2 High-speed USB Expansion Ports
- Built-in 10/100Base-T Ethernet
- Integrated Stereo Speakers
- Integrated Microphone • Keyboard and Mouse



INCREDIBLE!

FREE
INSTANT
64MB
RAM
UPGRADE

from MacWAREHOUSE
when you purchase
an iMac G3
for only
\$1299!
Ask for item
CPU1255.

Limited time offer!
CALL NOW!

\$29.95 installation fee applies.

For more information on
the NEW Apple iMac visit us at:
buyimac.warehouse.com

NEW VERSION! CORELDRAW 8

COREL

Only
\$99.95!*

with the purchase of any
Macintosh computer
Item # SBN0104.

*CorelDraw 8 and CPU must appear on the same invoice. Regular price for CorelDraw 8 is \$429.95. While supplies last.

**Savings based on individual products sold separately as of this magazine printing.



IMAC INTERNET BUNDLE

Get 5 great
Internet software
titles for only
\$49.95!*

when you purchase
an Apple iMac G3.

Item # AAP0539

Includes: Photodisc 75 Backgrounds & Objects for the Web, GoLive Personal Edition, StuffIt Deluxe and Cyber Patrol



*Retail packaging shown for promotional purposes only. Shipped in promotional packaging on CD-ROM. Internet Bundle must appear on the same invoice as iMac. Offer good while supplies last.

RETROSPECT EXPRESS 4.0

Only
\$49.95!
Ask for item # UT11365.

- Now protects your single computer or server volume
- Automatically backs up to tape or removable media
- Instant offsite backup via the Internet • Bootable CD

NEW! EPSON STYLUS 740 PRINTER

Only
\$279.95! EPSON
Ask for item # PR14065.

- 1440 x 720dpi w/ smaller ink drops
- Prints up to 6ppm black/5ppm color
- USB Compatible!



MICROSOFT OFFICE 98

Only
\$349.95!*
after rebate
Ask for item # BUS1150

*Price after Microsoft \$100 mail-in rebate when purchased with an Apple iMac. Price before rebate is \$449.95. Office 98 full version & Apple iMac must be purchased within 60 days of each other, between 8/1/98 and 12/31/98. Coupon in iMac box.



MacWAREHOUSE

Upgrade for your iMac G3!

See left page for details.

CALL FOR A
FREE
FULL-COLOR
CATALOG!



• UMAX Technologies • Microsoft • BestWare • Insignia Solutions • Broderbund

Plus, get FREE[†] CDs

Packed with software when you buy an iMac today!



Visit us at:
**buymacgames.
warehouse.com**
for our full selection of
great games for the Mac!



NEW VERSION! Mac OS 8.5

Only
\$89.95!
after internet
shopping spree rebate
SYS0292

FREE
SOFTWARE**
when you buy
Mac OS 8.5 today!

Includes: Cyber Patrol, Virex,
Compton's Interactive Encyclopedia,
Art Mania 10,000, & Solitaire Mania.
Ask for item # AAA0735.



- New Sherlock "Find" — easily search the Web with multiple search engines and instantly get results!
- New PowerPC native AppleScript — runs five times faster than previous versions!
- Improved Network Performance — integrated network browser makes navigating your network simple!

*Price after MacWAREHOUSE \$10 Internet shopping spree mail-in rebate. Price before rebate is \$99.95. Offer expires 1/15/99. Limit one rebate per customer (or total of 5 rebates per customer site). Rebate coupon and full details available at www.appleos8.warehouse.com or call customer service at 1-800-390-0706.
**\$3.95 shipping & handling applies. Shipped in promotional packaging.

Norton Utilities 4.0

Upgrade only
\$49.95!
after rebate
UTI1383

*Price after publisher's \$50 mail-in upgrade rebate. Proof of ownership of previous version of Norton Utilities for Macintosh required. Limit one per customer. Rebate expires 30 days after purchase date.



SoftWindows 98

Only
\$169.95!
COM1055

- Enables PowerMac and iMac users to run Microsoft Windows 98 applications!
- Launch and run these applications through a familiar Web browser interface.



Grolier Multimedia Encyclopedia 1999

Only
\$29.95!
after rebate
EDU2316

- Fast access to 58,000 articles, 22,000 Internet links, 15,000 images, 1,200 maps and 15 hours of sound
- *Price after publisher's \$20 mail-in rebate. Price before rebate is \$49.95. Rebate expires 8/31/99. Details in box.



The following CD-ROMs are included with iMac from Apple:

- Quicken Deluxe 98 • Microsoft Internet Explorer • Kai's Photo Soap SE • AppleWorks • FAXstf
 - Microsoft Outlook Express • Williams Sonoma Guide to Good Cooking • Netscape Navigator
 - Earthlink Total Access • Nanosaur • MDK
- Retail packaging shown for promotional purposes only.

FREE[†] with any iMac purchase from MacWAREHOUSE!
(Ask for item # AAA0715.)

- You Don't Know Jack II • Bungie Marathon • Bungie Abuse
- Nova Video Casino • Nova Solitaire Mania

FREE[†] with any purchase from MacWAREHOUSE!
(Ask for item # AAA0593.)

- Bungie Marathon Infinity

†Savings based on individual products sold separately as of this magazine printing.
†\$3.95 shipping and handling applies to each offer. Shipped in promotional packaging. Hurry, while supplies last!

**MacWAREHOUSE
EXCLUSIVE!**

**SAVE
up to \$1000[†]
on great software
when you buy an iMac today!**

See the savings bursts
on these two pages!

SAVE!

iMAC FAMILY COLLECTION

4 great learning titles
the whole family can
enjoy for only
\$39.95!

when you purchase
an Apple iMac G3.

Item # AAP0540

Includes: Grolier Encyclopedia 97, Mavis Beacon Teaches Typing 5.0, Oregon Trail II, and Troggle Trouble Math.



*Savings based on individual products sold separately as of this magazine printing.

*Retail packaging shown for promotional purposes only. Shipped in promotional packaging on CD-ROM. Family Collection must appear on the same invoice as iMac. Offer good while supplies last.

iMAC BATTLE BUNDLE

Get 5 great
games for only
\$49.95!

when you purchase
an Apple iMac G3.
Item # AAP0523

Includes: Myth, Civilization II,
Dark Forces, Tie Fighter and
F/A-18 Hornet 3.0

*Retail packaging shown for promotional purposes only. Shipped in promotional packaging on CD-ROM. Battle Bundle must appear on the same invoice as iMac. Offer good while supplies last.



*Savings based on individual products sold separately as of this magazine printing.

1-800-725-1450 ★ www.warehouse.com/md

ORDER TOLL-FREE 24 HOURS A DAY, 7 DAYS A WEEK!

MacWAREHOUSE

The largest direct computer reseller in the world!

**EXPRESS DELIVERY
OVERNIGHT!**

In-stock items, call by midnight (E).



Hi, I'm Sue. Call me
for more great deals!

PAGE 2 OF 8



Authorized
Catalog Reseller

MacWAREHOUSE

New, Screaming Fast

Apple • Global Village • PowerUser • Iomega • Olympus • Microtek

Global Village 56K V.90 Modem

As low as **\$99.99!**
when purchased at the same time as an Apple Power Mac G3 system!
AAP0491

*Savings based on regular MacWAREHOUSE pricing as of this catalog printing. Regular price is \$139.99.



Iomega 100MB Zip Drive

Only **\$119.95!**
DR11050

ZipPlus
works with both
Parallel and SCSI Ports
Item # **DR12274** ONLY \$169.95



Iomega 100MB Zip Disks

As low as **\$9.99!**
each,
in 10-pack

Gray 100MB Zip Disk 10-pack
Item # **ME7756** ONLY \$99.95
Multi-color 100MB Zip Disk 10-pack
Item # **BN5265** ONLY \$99.95



Olympus D-600L Camera

Only **\$899.95!**
IN6660

• 1280 x 1024dpi resolution
• 3X zoom with TTL SLR viewfinder
• 4MB SmartMedia included
Accessories Kit: Includes leather camera case, 4MB SmartMedia Card, rechargeable batteries and charger, AC adapter and software.
Item # **AC23606** ONLY \$199.95!



Microtek ScanMaker V310

As low as **\$49.95!**
INP1364

• 30-bit single-pass
• 300 x 600dpi optical resolution
• 8.5" x 11.7" max. document size
• SCSI interface
*Price after \$30 mfr's mail-in rebate.
Price before rebate is \$79.95. Ask for rebate coupon # **AA1172**. Offer expires 11/30/98.



APPLE 720
17" MONITOR
Only
\$499!
Item #
MON0602

New Power Mac G3 266MHz Desktop!

Only

\$1599!

ASK FOR
ITEM #
CPU1204

• 266MHz PowerPC G3 Processor • 32MB SDRAM (768MB max.)
• 4.0GB HD • 24X Built-in CD-ROM • 512K backside level 2 Cache
• 2MB SGRAM • Built-in 10Base-T Ethernet

NEW! POWER MAC G3/266MHz CPU1248:

64MB SDRAM, 4.0GB hard drive, DVD-ROM, 56K modem **\$1749**

TOP OFF YOUR G3 WITH ONE OF THESE APPLE MONITORS

MON0658: ColorSync 750 17" **\$699**

MON0657: ColorSync 850 20" .. **\$1499**

G3 SDRAM MEMORY UPGRADES

CHP0541: 32MB **\$159.95**

CHP0542: 64MB **\$299.95**

NEW! POWER MAC G3/300MHz DESKTOP

- 300MHz PowerPC G3 processor
- 64MB SDRAM (768MB max.)
- 6.0GB hard drive • 24X CD-ROM
- 100MB Iomega Zip drive
- 1MB backside level 2 cache
- 2MB SGRAM
- Built-in 10Base-T Ethernet

Only
\$1999!
Item # **CPU1205**



NEW! POWER MAC G3/300MHz MINITOWER

- 300MHz PowerPC G3 processor
- 64MB SDRAM (768MB max.)
- 8.0GB hard drive • 24X CD-ROM
- 100MB Iomega Zip drive
- 1MB backside level 2 cache
- 6MB SGRAM
- Built-in 10Base-T Ethernet

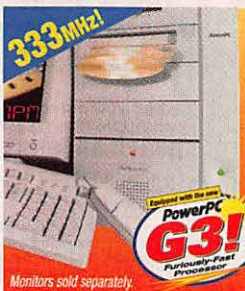
Only
\$2399!
Item # **CPU1233**



NEW! POWER MAC G3/333MHz MINITOWER

- 333MHz PowerPC G3 processor
- 128MB SDRAM (768MB max.)
- 9.0GB ultra-wide SCSI hard drive
- 24X CD-ROM drive • 6MB SGRAM
- 1MB backside level 2 cache
- Built-in 10Base-T Ethernet

Only
\$2999!
Item # **CPU1234**



NEW! MACINTOSH SERVER G3

- 300MHz G3 PowerPC processor
- 64MB SDRAM (768MB max.)
- 4.0GB ultra-wide SCSI HD • 24X CD
- Built-in 10Base-T Ethernet
- AppleShare IP 6.0 server software

Only
\$2999!
Item # **CPU1202**

Macintosh Server G3/333MHz:
128MB RAM/Two 9.0GB ultra-wide
SCSI HDs/100 Base-T Ethernet • 24X CD/
AppleShare IP 6.0 server software.
Item # **CPU1203** only \$4599!



• Our sales staff is ready to take your order 24 hours a day, 7 days a week. We accept the following major credit cards: Visa, MasterCard, Discover Card/NOVUS, AmEx. Your credit card will not be charged until each item is shipped (no surcharge). CT, IL, NJ, OH, VA and WA residents add applicable sales tax.
• Overnight delivery just \$4.95 per order up to 3 pounds. For all orders over 3 pounds, shipping is \$4.95 plus an additional \$1.50 per pound or fraction thereof. (Ex: shipping for a 4 pound order is \$6.45). Please add an additional handling charge of \$3.00 for all orders \$50.00 and under.

• Orders for "in-stock" items placed on weekdays up until 12:00 midnight (E), 10:00 pm (P) for Internet orders, ship same day for overnight delivery (barring system failure, etc.). We anticipate being able to ship "out-of-stock" items within 30 days.
• All items we sell come with the MacWAREHOUSE 30-Day Guarantee Against Defects. Call our Customer Service Department at 1-800-925-6227 for a Return Merchandise Authorization (RMA) number within 30 days of the original invoice date. All returns are subject to the following: 1. All products must be returned in original

packaging. 2. Shipping and handling charges are not refundable. 3. Software and consumables are not refundable unless returned unopened in original packaging with documentation. 4. Custom orders and cables are not refundable. 5. Products designated as "all sales final" are not refundable. If your Apple hardware is defective you must call Apple Computer, Inc. directly at 1-800-SOS-APPLE (1-800-767-2775). Apple Computer, Inc. will repair or replace products at its sole discretion. If you do return Apple hardware to MacWAREHOUSE, you will be assessed a 15% restocking fee which will

be charged to your account.
Copyright© 1998 Micro Warehouse, Inc. MacWAREHOUSE is a division of Micro Warehouse, Inc. Item availability and price subject to change without notice. We regret that we cannot be responsible for typographical errors. All prices shown in U.S. dollars.



We accept these major credit cards.

Power Mac G3s as low as \$1599!

Power Mac G3/266MHz desktop. See left page for details.



Global Village • Curtis • VST Technologies

**Prices slashed
SAVE Up to \$380!**

PowerBook G3

Now only

\$1999!

Was \$2299

- 233MHz PowerPC G3 processor
- 32MB SDRAM • 2.0GB hard drive
- 20X CD-ROM drive
- 10Base-T Ethernet
- 12.1" passive-matrix color display

ASK FOR ITEM # CPU1162.

While supplies last!

Floppy drive sold separately.
Ask for item # DRI2661.

POWERBOOK G3/233MHZ

CPU1163: 32MB SDRAM, 2.0GB hard drive, 20X CD-ROM, 56K modem, 12.1" passive-matrix color display was \$2579... **NOW ONLY \$2199!**
*While supplies last.

FREE† Curtis Carrying Case!

when you purchase an Apple PowerBook G3 today!
Ask for item # AAA0725. Offer good while supplies last.

†\$3.95 shipping and handling charge applies.

CURTIS

PowerBook G3 Accessories

NEW! VST Zip 100 Drive

Internal Only
\$249⁹⁵!
DRI2692



For PowerBook G3 Series

- Seamless user interface - behaves just like a floppy
- Bootable (Mac OS 8 boot disk provided)
- Includes Iomega tools

56K V.90 Fax/Modem PC Card

Only
\$189⁹⁹!
DMD3824



- K56Flex and V.90 technology cuts Web page downloading time almost in half!



PowerBook G3 Memory Upgrades

Call for our lowest prices and full selection!

- SDRAM DIMM

Fastest memory ever for your G3 PowerBook!

Apple PowerBook G3 Floppy Drive

Only
\$109⁹⁵!
DRI2661



NEW! APPLE POWERBOOK G3/233MHZ

- 233MHz PowerPC G3 processor
- 32MB SDRAM
- 2.0GB hard drive
- 20X CD-ROM drive
- 10Base-T Ethernet • 56K modem
- 12.1" active-matrix color display

Only
\$2299!
Item # CPU1249

Floppy drive sold separately.



NEW! APPLE POWERBOOK G3/233MHZ

- 233MHz PowerPC G3 processor
- 32MB SDRAM • 2.0GB hard drive
- 20X CD-ROM drive • 56K modem
- 10Base-T Ethernet
- 512K backside level 2 cache
- 14.1" active-matrix color display

Only
\$2799!
Item # CPU1238

Floppy drive sold separately.



NEW! APPLE POWERBOOK G3/266MHZ

- 266MHz PowerPC G3 processor
- 64MB SDRAM • 4.0GB hard drive
- 20X CD-ROM drive • 56K modem
- 10Base-T Ethernet
- 1MB backside level 2 cache
- 14.1" active-matrix color display

Only
\$3499!
Item # CPU1239

Floppy drive sold separately.



NEW! APPLE POWERBOOK G3/300MHZ

- 300MHz PowerPC G3 processor
- 64MB SDRAM
- 8.0GB hard drive
- DVD-ROM drive • 56K modem
- 10Base-T Ethernet
- 1MB backside level 2 cache
- 14.1" active-matrix color display

Only
\$4999!
Item # CPU1240

Floppy drive sold separately.



NEW! PowerBook G3 Battery

Only
\$219⁹⁵!
ACC3307

- Works with NEW G3 PowerBooks
- Lithium-Ion



1-800-725-1450 ★ www.warehouse.com/md

ORDER TOLL-FREE 24 HOURS A DAY, 7 DAYS A WEEK!

MacWAREHOUSE
The largest direct computer reseller in the world!

**EXPRESS DELIVERY
OVERNIGHT!**

In-stock items, call by midnight (E).



Hi, I'm Danielle. Call me for more great deals!



MacWAREHOUSE

Powerful New Version

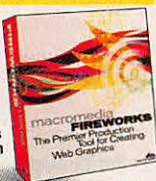
Apple • 3Com • Hitachi • Global Village • Sony • Macromedia

Macromedia Fireworks

Only
\$289⁹⁵!
COM0996

FREE* PhotoDisc's
75 Backgrounds
& Objects for the Web when
you buy Fireworks! Ask for
item # AAA0681.

*\$3.95 shipping and handling charge
applies. While supplies last.



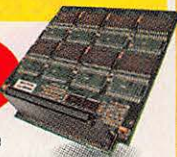
macromedia

PowerBook 32MB Memory Upgrades

As low as
\$159⁹⁵!

• Installation available

32MB for PowerBook 1400: Item # CHP0498, \$179.95
32MB for PowerBook 3400: Item # CHP0439, \$159.95



PalmPilot Professional

Only
\$229⁹⁵!
BN5505

• Includes MacPac
translation software
• Flash upgradable memory
• Easy-to-read screen



3Com U.S. Robotics

8MB Flash Storage Cards

Only
\$59⁹⁵!
MY7648

• 8MB compact flash
• Digital film for brand name digital
cameras including:



Nikon Kodak Konica

Global Village 56K V.90 Modem



Only
\$139⁹⁵!
DMD3467

• Compliant with both
V.90 and K56Flex
technology
• Flash ROM upgradable



PAGE 5 OF 8



Apple Power Mac G3 Prices Slashed!

As low as
\$1249⁹⁵!
was \$1499
Item # RCPU0956

APPLE 720 17" MONITOR
Only **\$499⁹⁵!**
Item # MON0602

APPLE POWER MAC G3 DESKTOP

• 233MHz PowerPC G3 processor • 32MB RAM (192MB max.)
• 4.0GB hard drive • 24X CD-ROM drive • 10Base-T Ethernet
*Reconditioned system. Reconditioned computers may not include original application software.
90 days parts and labor warranty. All sales final. While supplies last.

Many other reconditioned Power Mac G3 models available. Call for details.

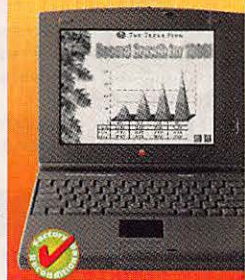
APPLE POWERBOOK DUO 230

• 33MHz 68030 processor • 12MB RAM
• 120MB HD • 14.4Kbps modem
• 9" grayscale SuperTwist display
• ClarisWorks 3.0

Only
\$299⁹⁵!
Item # RCPU1188

RCPU1195: PowerBook 180: 33MHz 68030 processor,
8MB RAM, 120MB HD, 14.4Kbps modem,
10" black & white active-matrix
display, ClarisWorks 3.0. **only \$499⁹⁵!**

*Reconditioned system. Reconditioned computers
may not include original application software.
90 days parts and labor warranty. All sales final.
While supplies last.



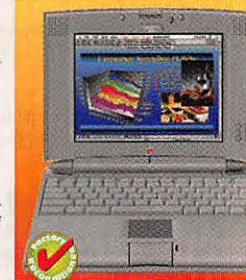
APPLE POWERBOOK 520C

• 25MHz 68040 processor • 20MB RAM
• 240MB HD • 19.2Kbps modem
• 9.5" passive-matrix color display
• ClarisWorks 3.0

Only
\$699⁹⁵!
Item # RCPU1107

RCPU1196: PowerBook 540C: 33MHz 68LC040
processor, 20MB RAM, 240MB HD,
19.2Kbps modem, 9.5" active-matrix color
display, ClarisWorks 3.0. **only \$799⁹⁵!**

*Reconditioned system. Reconditioned computers
may not include original application software.
90 days parts and labor warranty. All sales final.
While supplies last.



HITACHI 17" MONITOR

HITACHI

• 17" monitor (15.9" viewable)
• Resolutions up to
1152 x 870 @ 75Hz
• 28mm dot pitch
• Manufacturer's 3-year warranty

Only
\$459⁹⁵!
Item # MON0548

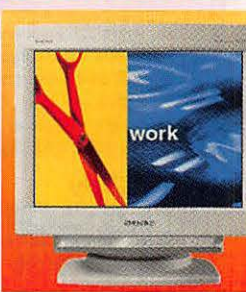


SONY 400PS 19" MONITOR

SONY

• 19" monitor (18" viewable)
• 25mm aperture grille
• 1600 x 1200
resolution @ 75Hz
• Short-neck design takes
up less space

Only
\$869⁹⁵!
Item # MON0630



Jaz 2.0GB Cartridges

As low as **\$99⁹⁵!** each,
in quantity
Ask for item # MED0508.

Quantity: 1-2 3-4 5+
Price: \$124.95 ea. \$109.95 ea. \$99.95 ea.



APC 200VA UPS

Only **\$89⁹⁵!**
Ask for item # DUP2098.

APC
• Manufacturer's
2-year warranty

Full-time surge protection and instantaneous battery
back-up to protect your equipment against brownouts,
overvoltages, and blackouts.



Power Mac G3 Memory Upgrades

Call for our latest
low prices!

• SDRAM DIMM
• Full selection available



MacWAREHOUSE

Mac OS 8.5 only \$89⁹⁵!

after Internet shopping spree rebate

See below for details.



Nikon • Kensington • Iomega • Symantec • UMAX • Microsoft

New Version! Mac OS 8.5

Only \$89⁹⁵!

after Internet shopping spree rebate



MAC OS 8.5 FEATURES:

- New PowerPC native AppleScript — runs five times faster than previous versions!
- New Sherlock "Find" — easily search the Web with multiple search engines and instantly get results!
- Improved Network Performance — integrated network browser makes navigating your network simple!
- New Smart Scrolling — makes navigating through your documents and Web sites more efficient than ever!

Ask for item # SYS0292.

FREE!

A \$135 VALUE!

You get all these software titles

FREE with your Mac OS 8.5 purchase!

- Cyber Patrol • Solitaire Mania • Art Mania 10,000
- Compton's Interactive Encyclopedia • Virex



Ask for item # AA0735

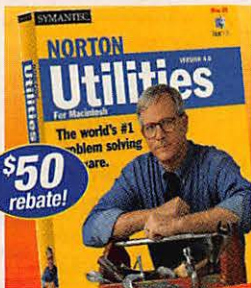
**\$3.95 shipping and handling applies. Shipped in promotional packaging. †Value based on products sold separately as of this magazine printing.

*Price after MacWAREHOUSE \$10 Internet shopping spree mail-in rebate. Price before rebate is \$99.95. Offer expires 1/15/99. Limit one rebate per customer (or total of 5 rebates per customer site). Rebate coupon and full details available at www.appleos8.warehouse.com or call customer service at 1-800-390-0706.

NEW! NORTON UTILITIES 4.0

- HFS Plus compatibility
- Power PC native
- Enhanced SCSI/IDE support

Upgrade only
\$49⁹⁵!
after rebate
Item # UT11383



\$50 rebate!

*Price after publisher's \$50 mail-in upgrade rebate. Price before rebate is \$99.95. Proof of ownership of previous version of Norton Utilities for Mac required. Limit one per customer. Rebate expires 30 days after purchase date. Copy of invoice required.

MICROSOFT OFFICE 98

Microsoft®

- Includes: Word 98, PowerPoint 98, Excel 98 and Outlook Express

Upgrade only
\$259⁹⁵!
Item # UPG0778

BUS1150: Microsoft Office 98 Full Version only \$449.95



Epson Stylus Color 850 Printer

Only
\$349⁹⁵!
PR13559

- 1440 x 720dpi
- 9ppm black/ 5.5ppm color
- Optional Networking

EPSON®



Small ink droplets for amazing detail!

NEW! Sony Digital Cameras

As low as
\$499⁹⁵!
IN7214

- *Price for Sony FD51
- High speed 2x disk drive



Sony FD71 Digital Camera (shown).
• 10X zoom lens • Whole disk copy • E-mail mode
• 2.5" color LCD w/Solar Window™ Panel
Only \$699.95, ask for item # IN7215.

KENSINGTON Turbo Mouse

Only
\$99⁹⁵!
BND2881

- 4-button design
- MouseWorks software included



With FREE™ CE Software's Instant QuickKeys!

*Shipped in promotional packaging on CD-ROM with purchase of Turbo Mouse. Offer expires 2/1/99.

1.0GB Jaz Cartridges

As low as
\$89⁹⁵!
each
MED0177

Jaz 1.0GB 3.5" cartridges

1-2 Cartridges	3-4 Cartridges	5+ Cartridges
\$99.95 ea.	\$94.95 ea.	\$89.95 ea.



NIKON COOLPIX 900 DIGITAL CAMERA

Nikon



New low price!

- 1.3 mega pixel
- 2.0" color LCD display
- Exclusive 3X zoom Nikkor lens

Only
\$849⁹⁵!
was \$899.95

Item # IN7005

Get a FREE* gift when you order online.

Every time you order from our full line of Mac products on the Web, you can get one of these FREE*:
Marathon Infinity, Cyberpatrol CD, Newpoint Surge SAFE Protector, and more!

*\$3.95 shipping and handling applies. Limit one per customer per order. Shipped in promotional packaging. While supplies last.



UMAX 1200S 30-bit Scanner

As low as
\$199⁹⁵!
IN6249

- 600 x 1200dpi resolution
- 9600 x 9600dpi enhanced
- Scans legal size 8.5" x 14"



\$50 Rebate!

*Price after mfr's \$50 mail-in rebate. Price before rebate is \$249.95. Ask for coupon # AA1131. Offer expires 12/31/98.

1-800-725-1450 ★ www.warehouse.com/md

ORDER TOLL-FREE 24 HOURS A DAY, 7 DAYS A WEEK!

MacWAREHOUSE

The largest direct computer reseller in the world!

EXPRESS DELIVERY OVERNIGHT!
In-stock items, call by midnight (E).



PAGE 6 OF 8



**NEW
VERSION!**

MacWAREHOUSE

Upgrade to Adobe

Apple • Adobe • ATI • Epson • Kodak • Focus Enhancements

DC210 Plus Digital Camera

**Only
\$599⁹⁵!**
IN7315

Kodak



- 2X zoom lens
- 1152 x 864 max. resolution
- 1.8" color LCD display

AC adapter
and 8MB card
now included!

DC210 Mac Connection Kit, only \$24.95! Item # ACC3243

Adobe Photoshop 5.0

**Upgrade only
\$189⁹⁵!**
UPG0836



- Quickly undo or redo seven steps so you're free to experiment

Adobe Photoshop 5.0 upgrade for PC:
Item # UP4060, \$179.95.

QuickCam

**Only
\$199⁹⁵!**
INP0676



- 640 x 480dpi resolution
- 24-bit color camera
- Adjustable lens
- Self-timer



Extended On-Site Service*

Six great reasons to get complete system coverage:

- 1 Toll-Free Technical Help available 24 hours a day!
- 2 Fast On-Site Support with next business day response in most areas for most items!
- 3 Free Replacement if unit cannot be repaired!
- 4 No Deductible — 100% coverage on parts and labor!
- 5 24- and 48-Month Coverage available from date of purchase!
- 6 Fully Insured — underwritten by A.M. Best!

Service you can depend on! Support and repairs are provided by DFS, which has been providing superior, price-competitive programs for over 20 years!

Consult the chart below to see which warranty best fits your needs:

Cost of Computer and/or Peripherals	Warranty Price (48 months)	Ask for item #
\$701 - \$1,200	\$99	WAR0001
\$1,201 - \$2,000	\$149	WAR0002
\$2,001 - \$3,000	\$189	WAR0003

Call your Account Manager for details on orders over \$3,000.

Call your sales representative today!

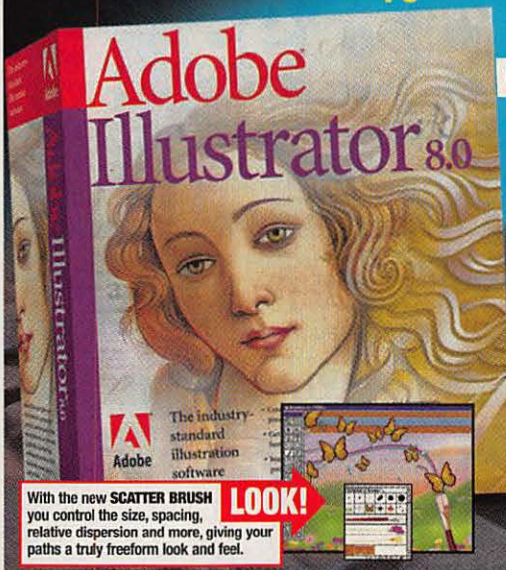
*Note: This promotion is not a service agreement, but an outline of coverage available through DFS. Please call Micro Warehouse, Inc. for information and read the complete Service Agreement from DFS for exact coverages, terms, and conditions. On-site service begins after manufacturer's warranty expires. Plan not available on international or Florida orders. All Returns not covered under the standard MicroWarehouse RETURN POLICY are subject to a \$25 Return Fee assessment.

PAGE 7 OF 8



NEW! Adobe Illustrator 8.0!

Upgrade only **\$119⁹⁵!**
Ask for item # UPG0887.



With the new **SCATTER BRUSH** you control the size, spacing, relative dispersion and more, giving your paths a truly freeform look and feel.

LOOK!

8 Great Reasons to Upgrade!

- 1 **Art Brush:** Save objects as Art brushes and apply to any path.
- 2 **Photo Crosshatch Filter:** Turn scanned photos into textured or crosshatched sketches.
- 3 **New Pencil Tool:** Tweak shapes easily and automatically.
- 4 **Smooth and Erase Tools:** Quickly smooth out crooked paths; smoothly erase parts of paths.
- 5 **Actions Palette:** Record and play back a series of steps to automate commonly illustrated tasks.
- 6 **Smart Guides:** Move, align, transform, and create shapes and paths with exactness.
- 7 **Live Blends:** Blends are now live so you can edit them freely.
- 8 **Free Transform Tool:** Consolidate scaling, skewing, rotating, and functionality in one tool.

Full version item # GRA2649, only \$359.95!

FREE! Extensis Collect Pro 2.0 & Hot Door Transparency

When you order Adobe Illustrator 8.0, Item # AAA0718.
*\$3.95 shipping and handling applies. While supplies last.
**Value based on individual products sold separately as of this magazine printing.



EPSON STYLUS COLOR 740 PRINTER

EPSON®

- 1440 x 720dpi • USB compatible
- 6ppm black/5ppm color
- Smaller ink drops for amazing detail

**Only
\$279⁹⁵!**
Item # PR14065

Stylus Color 850 (network)
Ask for item # PR13559: \$349.95



FREE* F/A-18 HORNET 3.0

with purchase of
16X, 24X, or 32X
CD-ROM Drive.
Ask for item
AAA0520.

**WHILE
SUPPLIES
LAST!**

**16X external
CD-ROM drive only
\$129⁹⁵!**
Item # DRI2663

*\$3.95 shipping and handling applies. Shipped in promotional packaging on CD-ROM.



NEWER TECHNOLOGY G3 UPGRADE

- 220MHz G3 Processor
- 512K cache @ 110MHz

**Only
\$599!**
Item # DRI2529

- 333MHz G3/1MB cache @ 166MHz
Ask for item # DRI2864: \$1349
- 366MHz G3/1MB cache @ 183MHz
Ask for item # DRI2866: \$1599
- 400MHz G3/1MB cache @ 200MHz
Ask for item # DRI2868: \$2149



QUARKXPRESS 4.0

- Use style sheets for individual words, not just paragraphs!
- Zoom up to 800% magnification!
- Draw curved lines with Bézier tool and place text along curved lines!
- Eight different measurement systems to choose from!

**Only
\$699⁹⁵!**
Item # DTP0557



\$10 Rebate!
New low price!

Fuji Zip Media

As **\$899⁹⁵!** each, in 10-pack
low as **\$899⁹⁵!**
Ask for item # ME7975

*Price after manufacturer's \$10 mail-in rebate for 10-pack. Price for 10-pack before rebate is \$99.99. Limit 2 per address.

USR V.90 56K Fax/modem

Only \$147⁹⁹!
Ask for item # DM03448

*\$3.95 shipping & handling applies. Includes Earthlink Total Access, and Netscape Communicator. Shipped in promotional packaging. Ask for item # AAA0639.

FREE*
Modem Software
with any US Robotics
modem purchase.

Amazon Inkjet Supplies

As **\$1499⁹⁵!** each,
low as **\$1499⁹⁵!** in 2-pack
Ask for item # BN5560.

Color Ink Cartridge for Epson Stylus Color 850:
Ask for item # BN5561, 2-pack only \$35.99.
**\$3.95 shipping and handling applies. Shipped in promotional packaging. While supplies last, Ask for item # AA1195.

Illustrator 8.0 for only \$119⁹⁵!

See left page for details.



Hewlett-Packard • Mitsubishi • Caere • Iomega • TDK • Asante • Farallon

HP LaserJet Printers

HP LASERJET 4000N
Only \$1449!

Prints up to 17ppm, 1200dpi maximum resolution, 100MHz RISC Processor, 500-sheet paper tray.
Ask for item # PR12975.

HP LASERJET 6MP
Only \$929⁹⁵!

Prints up to 8ppm, 600 x 600dpi maximum resolution, LocalTalk port, Adobe PostScript level 2.
Ask for item # INP0975.



HP LASERJET 5000N (NOT SHOWN)
Only \$2049!

16ppm, 1200dpi resolution, prints 3 x 5 to 11 x 17.
Item # PR13443.

NEW HP LASERJET 8000N
Only \$2749⁹⁵!

Prints up to 24ppm, 1200dpi maximum resolution, 133MHz RISC processor.
Ask for item # PR13724.

As low as
\$929⁹⁵!
Item # INP0975

up to
24
ppm



HP BLACK TONER CARTRIDGE
As low as \$59⁹⁹ ea.

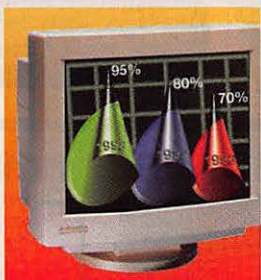
Item # 63222. Call for details.

MITSUBISHI 91TXM 21" MONITOR



- 21" (19.7" viewable)
- Diamondtron CRT
- .28 aperture grille
- 1600 x 1200 resolution @ 75Hz.

Only
\$1089⁹⁵!
Item # MON0457



IOMEGA JAZ 1.0GB DRIVE

- Includes a 1.0GB Storage Cartridge with Jaz utility software!

Internal only
\$279⁹⁵!
Item # DR4840

External drive (shown); only \$299.95!
Ask for item # DR11119.

JAZ 1.0GB CARTRIDGES

Buy 5 Jaz 1.0GB Cartridges and get 20 CD-Rs FREE!
Ask for item # BN5131; only \$499.75!



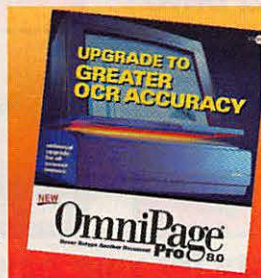
OMNIPAGE PRO 8.0



As low as
\$79⁹⁵!

when purchased with any fax/modem or scanner from MacWAREHOUSE.

Item # AAP0518



www.webauction.com

Bids \$1
starting at \$1

on Mac computers and lots of other great products.

New Auctions Daily!

Join the action at **WEBAUCTION.com**

Products shown not necessarily being auctioned currently.



Power Macs
starting at \$100!

Marathon Infinity



FREE!
with every order!
AAA0593

• Blast your way through this alien nightmare!

*\$3.95 shipping and handling applies. While supplies last. Shipped in promotional packaging on CD-ROM.

EtherMac iPrint Adapter

Only
\$109⁹⁹!
DEP1734



- Offers LocalTalk connectivity for your iMac
- Supports up to 8 LocalTalk-equipped printers or Macs



74 Minute CD-Recordables

As low as
\$149⁹⁵!
each in 150-pack
ME7492



*150-pack only \$223.99. Shipped in shrink-wrap without jewel case or spindle. TDK Grey Cell Ltd. 74 min. CD-R only \$2.99 each. Ask for item # ME7931. While supplies last.

Asante Fast 10/100 PCI Adapter

Only
\$49⁹⁹!
DEC3343

- 10/100 PCI adapter Mac/PC
- Auto negotiation

10/100 PCI Adapter 5 pack (Mac/PC) only \$239.99!
Ask for item # DEC3344.



SupraExpress 56K Flex Speakerphone Modem

Only
\$49⁹⁹!
after rebate
DMD2491

- Flash ROM upgradable
- *Price after mfr's \$50 mail-in rebate. Price before rebate is \$99.99. Offer expires 12/31/98. While supplies last.



PAGE 8 OF 8

1-800-725-1450 ★ www.warehouse.com/md

ORDER TOLL-FREE 24 HOURS A DAY, 7 DAYS A WEEK!

MacWAREHOUSE
The largest direct computer reseller in the world!

EXPRESS DELIVERY OVERNIGHT!
In-stock items, call by midnight (E).



Hi, I'm Sue. Call me for more great deals!

The Mac Zone®

Memory

FREE*

64MB RAM WITH EVERY

Take off with this deal!

FREE* 64MB

HURRY!
While supplies
last

After \$80
mail-in rebate.
Low Zone price
\$1379.00.

Order Item
#07925

Only
\$1299

#07728



**SAVE
\$100!**

**Microsoft®
Office 98/
iMac Bundle**

#17682 iMac/MS Office 98 Gold Bundle \$1699*

#17686 iMac/MS Office 98 Standard Bundle . \$1599*

*After \$100 mail-in rebate. Offer expires 12/31/98.



Get Connected with USB Products for your new iMac!

**ONLY
\$99⁹⁸**
#16630

**AsanteTalk 10T
to LocalTalk Cable**

**ONLY
\$179⁹⁸**
#12196

**Imation USB
Superdisk**

**ONLY
\$249⁹⁸**
#37174

USB SparQ Drive

**ONLY
\$149⁹⁸**
#95251

**USB
Zip Drive**

**ONLY
\$149⁹⁸**
#18386

**UMAX 1220U
Duo deluxe**

**ONLY
\$279⁹⁸**
#31720

Epson Stylus 740

**ONLY
\$39⁹⁸**
#31906

**iBall USB
Trackball**

**ONLY
\$249⁹⁸**
#60203

HP 672c w/ USB

**ONLY
\$79⁹⁸**
#77949

**Entrega 4-port
USB hub**

MORE USB Products for your new iMac!

- | | |
|---|--|
| #35295 La Cie 4.3GB External Drive . . . \$379.98 | #78043 Entrega USB 7 Port Hub \$129.98 |
| #35294 La Cie 6.4GB External Drive . . . \$499.98 | #60201 HP 694c with USB. \$269.98 |
| #31901 iMouse USB mouse. \$24.98 | |
| #31933 iKey USB keyboard \$39.98 | |

**we're open
24/7
hours a day
days a week**



Corporate bids welcome! Fax to 1-800-684-8080

1-800-436-0606 WWW.ZONES.COM

Source Code
MW812

A NASDAQ® COMPANY Ticker Symbol: MZC

Madness!

NEW iMac COMPUTER SYSTEM!

iMac Rocks!

"In terms of the Internet, the iMac has it all."

— Adam Engst, MacWEEK

Not just for Internet!

Breakthrough Performance

- 233MHz PowerPC G3 processor/66MHz system bus
- 4.0GB IDE hard drive
- 32MB SDRAM, expands to 128MB
- 512K of backside level 2 cache

Advanced Multimedia

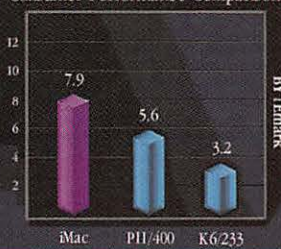
- 15-inch monitor (13.8-inch viewable)/1024x768 max. res. 75MHz refresh /28mm dot pitch
- 24X CD-ROM
- 2MB SGRAM, expandable to 4MB
- Built-in stereo speakers w/simulated surround sound (SRS)
- Integrated microphone
- Two headphone jacks

Integrated Communications

- Built-in 56K modem
- 10/100Base-T Ethernet
- Two 12Mbps Universal Serial Bus (USB) ports
- 4Mbps infrared technology (IrDA) port

G3 Advantages

Consumer Performance Comparison



▲ Apple optimized this new PowerPC processor specifically for Mac OS 8's multitasking capabilities. Its innovative backside cache technology dramatically increases the processor's performance. And for even more zip, they boosted memory, bus, and hard drive access speeds for dramatically decreased data-transfer times.

Why USB?

USB New universal standard for high-speed peripheral expansion.

USB Easy plug-in for up to 127 devices.

USB Hot-Swappable: No powering down or rebooting system when connecting.

USB Wide range of available and forthcoming accessories.



Included G3 Software

Pre-Installed

- Apple Works
- MS Internet Explorer
- Netscape Navigator
- Earthlink Total/Access
- FAXstf
- Nanosaur
- Quicken Deluxe 98*
- Williams-Sonoma Guide to Good Cooking*

*Requires CD (comes w/unit)

Also Included

- Kai's Photo Soap SE
- MDK

Plus More!

Products shipped in promotional packaging.



FREE!

While supplies last. Ask for Item#57953

Grolier Encyclopedia 1998
with your iMac purchase!



FREE!

GoLive Cyberstudio

2.0 Personal Edition
with your iMac purchase!
While supplies last. Ask for Item#71965



iMac Top Ten List

- | | |
|--|---------------------|
| 1. Microsoft Office 98 #55871 | \$449 ⁹⁸ |
| 2. Act 2.8 #06231 | \$149 ⁹⁸ |
| 3. Norton AntiVirus 5.0 #00116 | \$63 ⁹⁸ |
| 4. TechTool Pro 2.0 #87067 | \$94 ⁹⁸ |
| 5. Norton Utilities 4.0 #04890 | \$96 ⁹⁸ |
| 6. Virtual PC 2.1 98 #20634 | \$168 ⁹⁸ |
| 7. Stuffit Deluxe 4.5 #05827 | \$74 ⁹⁸ |
| 8. Connectix Triple Pack: Includes RAM Doubler 8, Speed Doubler 8, Surf Express #32550 | \$84 ⁹⁸ |
| 9. Family Tree Maker Deluxe #80635 | \$79 ⁹⁸ |
| 10. Extreme Mac 12 Pack #07427 | \$39 ⁹⁸ |
| 11. Myth 2: Soulblighter #34779 | \$49 ⁹⁸ |
| 12. Carmaggedon #72741 | \$29 ⁹⁸ |

Call for your **FREE CATALOG!**

All the latest computer products at discount prices!



Expect the Best!

Low Prices • Selection • Expertise

If for any reason you are not satisfied, please call our No Excuses Hotline: 1-800-258-0270.

1-800-436-0606

www.zones.com

Credit cards are not charged until the order is shipped. Most products ship the same day (barring system failure, etc.). Shipping options include Ground, 2nd Day and Overnight delivery. Freight is based on average product weight. Handling extra. Insurance available. Special orders may require special shipping and handling charges. Call for international shipping rates. Prices and product availability subject to change without notice. Specials and promotions may be limited to stock on hand. Not responsible for typographical errors.

©1998 Copyright Multiple Zones International Inc. All rights reserved. Unauthorized duplication is a violation of applicable laws. Apple, the Apple logo, Macintosh and PowerBook are registered trademarks of the Apple Computer, Inc.

The Mac Zone®



Power up

FREE* 64MB RAM WITH EVERY

BITE into this deal!

FREE* 64MB

HURRY!
While supplies last

*FREE after Mfr Mail-in rebate. Memory price will be added to the cost of the G3 you select.

Order Item
#07971

Powered by the
High Speed
PowerPC™
G3
processor!

Check out
The Mac Zone's
BEST SELLING product!

Memory Upgrades G3 PowerBook® Series

UPGRADE	ITEM #	ONLY
32MB Upgrade	#05057	\$99.98
64MB Upgrade	#05059	\$182.98
128MB Upgrade	#05061	\$262.98

*Apple Business Lease: 36-month, fair-market value lease based on approved credit (\$1400 minimum lease amount). Other leasing options available. Call for details. Apple Commercial Credit is administered by Dana Commercial Credit Corporation. PowerPC® and the PowerPC logo® are the trademarks of International Business Machines Corporation, used under license therefrom. **Extended service provided by a third party provider. Call for full details.

Digital Cameras

73283	Kodak DC260 Digital Camera	\$999.98
20250	Sony FD71 Mavica Digital 10x Zoom Digital Camera w/ FREE 10pk of Floppy Diskettes	\$699.98
93849	Sony FD81 Mavica Digital 3x Optical Zoom Digital Camera w/ FREE 10pk of Floppy Diskettes	\$799.98
32315	Nikon Coolpix 900 Digital Camera	\$829.98
53947	Olympus D-600L Digital Camera	\$899.98
32256	Olympus D-500L Digital Camera w/ FREE SNAPZ SmartMedia 2MB Memory	\$699.98
32260	Olympus D-320L Digital Camera w/ FREE SNAPZ SmartMedia 2MB Memory	\$399.98
32258	Olympus D-340L Digital Camera w/ FREE SNAPZ SmartMedia 2MB Memory	\$499.98
32308	Epson PhotoPC 700 Digital Camera w/ FREE SNAPZ 4MB Compact Flash Memory	\$699.98
32261	Olympus D-220L Digital Camera w/ FREE SNAPZ SmartMedia 2MB Memory	\$299.98
73282	Kodak DC220 Digital 2x Zoom Camera	\$799.98

Fixed HD / CD Drives

43116	Quantum Fireball ST 3.2GB	
	SCSI 5400 Int hard drive OEM	\$199.98
70441	La Cie 4.3GB External SCSI 5400RPM	\$279.98
70446	La Cie 4.3GB External SCSI 5400RPM	\$369.98
70443	La Cie 4.6GB External SCSI 5400RPM	\$429.98
70448	La Cie 4.6GB External SCSI 5400RPM	\$499.98
12135	La Cie 4.6GB External SCSI 5400RPM	\$529.98
12155	La Cie 4.6GB External SCSI 5400RPM	\$599.98
70444	La Cie 9.1GB External SCSI 5400RPM	\$539.98
70449	La Cie 9.1GB External SCSI 5400RPM	\$649.98
38221	La Cie DVD-RAM External SCSI Drive	\$799.98
70409	La Cie 4x8 External SCSI CD-Recorder	\$429.98
60513	La Cie 4x6x2 External SCSI CD-RW w/Toost	\$529.98
95249	La Cie 36x SCSI External CD-Rom Drive	\$159.98
91952	Fuji CD-R 74min Single	\$1.98
47562	Fuji CD-R 5 pack with \$10 rebate	\$14.98
59776	Fuji CD-R 10 pack with \$20 rebate	\$29.98
21258	Fuji CD-R 25 pack with jewel cases	\$38.98

Zip Drives and Media

51752	Zip Internal ATA/PI w/5.25 mounting	\$99.95
73832	Zip Internal SCSI w/5.25 mounting	\$119.95
55181	Zip External SCSI Remanufactured*	\$99.95
12220	Zip External SCSI	\$119.95
52581	ZipPlus External SCSI & Parallel	\$169.95
32251	Zip large carrying case	\$29.95
83475	Zip PowerBook SCSI adapter	\$19.95
	Media	
12236	Iomega Zip 100MB Mac Media Gray 3pk	\$49.95
12237	Iomega Zip 100MB Mac Media Gray 6pk	\$79.95
12238	Iomega Zip 100MB Mac Media Gray 10pk	\$99.95
73831	Iomega Zip 100MB Mac Media Color 10pk	\$99.95
59784	Fuji Zip Color 5pk with \$10 rebate	\$59.98
37037	Fuji Zip Color 10pk with \$10 rebate	\$99.98
35459	Fuji Zip Gray 5pk with \$10 rebate and Free Case	\$59.98
37186	Fuji Zip Gray 10pk with \$10 Rebate	\$99.98
37041	Fuji Zip Gray 20pk w/ 3 Free Disks by mail	\$198.98
86334	Fuji Zip Media 100MB Mac Disk	\$14.98

Removable HD and Media

73771	Jaz 1GB SCSI Int Drive Remanufactured*	\$199.95
73839	Jaz 1GB SCSI Ext Drive Remanufactured*	\$199.95
25658	Jaz 1GB SCSI Int Drive	\$279.95
25659	Jaz 1GB SCSI Ext Drive	\$299.95
95233	Jaz 2GB SCSI Int Drive	\$349.95
95234	Jaz 2GB SCSI Ext Drive	\$349.95
73838	SyJet 1.5GB Ext SCSI Removable hard drive	\$299.98
82841	Jaz large carrying case	\$29.98
43360	Jaz Card PCMCIA Fax SCSI 2	\$124.98
	Media	
81235	Jaz 1GB Cartridge	\$99.95
75663	Jaz 1GB Cartridge 3 Pack	\$269.85
73835	Jaz 2GB Cartridge	\$124.95
73836	Jaz 2GB Cartridge 3 Pack	\$299.85
37174	SparQ 1GB Ext USB Drive	\$249.98
83366	SyJet Mac Cartridge 3 pack	\$199.98
83365	SyJet Mac Cartridge Single	\$39.98
14900	SyJet Portable Drive Case	\$39.98

Corporate bids welcome! Fax to 1-800-684-8080

1-800-436-0606 **WWW.ZONES.COM**

Source Code
MW812

A NASDAQ® COMPANY Ticker Symbol: MZOT

we're open
24/7
hours a day
7 days a week



Your PowerBook!

NEW APPLE® MACINTOSH® G3 POWERBOOK



MAC ZONE EXCLUSIVE!

\$288
Software
Value!



SAVE BIG!

on SoftWindows 95 5.0

Purchase a PowerBook G3 and get SoftWindows 95 5.0 for **Only \$124.98**

PLUS

GET GoLive CyberStudio Personal Ed. FREE!

Ask for Item #17294.

Offer is good while supplies last. (Software offered is full retail packaging)

ONLY \$1999
#56710

OR LEASE
FOR JUST
\$74/Mo.*

**Outstanding performance
at an unbeatable price**

**Apple® PowerBook®
G3/233MHz**

**While
supplies last!**

233
MHz

32MB
RAM

2.0GB
Hard Drive

20x
CD-ROM

12.1"
FSTN DISPLAY

10
Base-T
Ethernet

NEW!

ONLY \$2799
#19056

OR LEASE
FOR JUST
\$104/Mo.*

**K56flex modem lets you tap
into your network or the Internet**

**Apple® PowerBook®
G3/233MHz**

233
MHz

32MB
RAM

2.0GB
Hard Drive

20x
CD-ROM

14.1"
TFT DISPLAY

10
Base-T
Ethernet

56K
FLEX
MODEM

NEW!

ONLY \$3499
#19057

OR LEASE
FOR JUST
\$129/Mo.*

**Showcase your multimedia
creations wherever you go**

**Apple® PowerBook®
G3/266MHz**

266
MHz

64MB
RAM

4.0GB
Hard Drive

20x
CD-ROM

14.1"
TFT DISPLAY

10
Base-T
Ethernet

56K
FLEX
MODEM

Accessories for your G3 PowerBook!

- #18038 PowerBook G3 DVD Video Kit \$499.98
- #05682 PowerBook G3 Floppy Disk Drive \$104.98
- #05683 PowerBook G3 AC Power Adapter \$79.98
- #07703 PowerBook G3 Li-ion Battery \$199.98

ONLY \$4999
#19058

OR LEASE
FOR JUST
\$184/Mo.*

The ONLY PowerBook with DVD

**Apple® PowerBook®
G3/300MHz**

**Special
Purchase!**

300
MHz

64MB
RAM

8.0GB
Hard Drive

DVD
CD-ROM

14.1"
TFT DISPLAY

10
Base-T
Ethernet

S
Video
Output

**SEE LAST PAGE OF THIS AD
for more great PowerBook solutions.**

Modems

78164	Apple Geoport Telecom Adapter 33.6	\$54.98
13074	Performant 33.6 PC Card Fax/mod Mac	\$89.98
13079	Performant 56k PC Card Fax/mod Mac	\$119.98
60385	SupraExpress 56k D/F For Mac	\$114.98
60339	Teleport 56k v.90 ext Fax/Modem for Mac	\$129.98
60313	3Com/USR 56k v.90 D/F for Mac	\$147.98
36229	Viking 56k v.90 external fax/modem	\$99.98
36808	Global Village 56k v.90 PC Card	\$179.98

Input

75112	Macally Two Button Mouse	\$29.98
87464	Kensington Mouse in a Box	\$39.98
03727	Kensington Keyboard in a Box	\$49.98
89379	Kensington Mouse 1.0	\$59.98
93628	Kensington Thinking Mouse	\$69.98
78420	Kensington Orbit	\$69.98
87483	Kensington Turbo Mouse 5.0	\$99.98
85553	Address Touch Extended Keyboard	\$39.98

75111	Macally MK-8000 Keyboard with Touch Pad	\$72.98
85594	Addresso Tru-Form Ergo. Keyboard w/Touchpad	\$89.98
75109	Macally Port Xpander	\$58.98

Powerbook Essentials

07157	Targus Leather Notebooks	\$99.98
07173	Samsonite Notebook System Case	\$69.98
07175	Samsonite Notebook Compact Case	\$49.98
42245	Kensington Saddle Bag for PB G3 (blk)	\$89.98
07159	VST internal Zip drive	\$239.98
06421	Kensington Security Cable	\$39.98
57714	HP 340 cbi portable Inkjet Printer	\$329.98
18038	Powerbook G3 DVD ROM Kit	\$499.98
43690	Konex Mobile Connector	\$119.98
20634	Virtual PC 98	\$168.98
07159	VST G3 Zip Drive	\$239.98
82633	PB Universal SCSI Adapter	\$31.98
00116	Norton AntiVirus 5.0	\$63.98
81849	Dave Mac-to-PC file and print software	\$129.98
00642	PowerPrint 4.5	\$98.98

83331	Focus TVView Gold	\$299.98
96677	Apple Remote Access	\$49.98
08234	Act!	\$159.98
93976	Norton Utilities 3.5	\$98.98
89379	Kensington Mouse 1.0	\$59.98
03765	Road Rocket	\$289.98
08640	BookEndz	\$199.98
88753	AirDock	\$64.98
55677	IREZ Capsure zoomed video PCMCIA	\$109.98
55678	KritterKam	\$239.98
44546	VST auto adapter	\$78.98

Call
for your
FREE
CATALOG!
All the latest computer
products at discount prices!



Expect the Best!
Low Prices • Selection • Expertise

If for any reason you are not satisfied,
please call our No Excuses Hotline: 1-800-258-0270.

1-800-436-0606

www.zones.com

Credit cards are not charged until the order is shipped. Most products ship the same day (barring system failure, etc.). Shipping options include Ground, 2nd Day and Overnight delivery. Freight is based on average product weight. Handling extra. Insurance available. Special orders may require special shipping and handling charges. Call for international shipping rates. Prices and product availability subject to change without notice. Specials and promotions may be limited to stock on hand. Not responsible for typographical errors.
©1998 Copyright Multiple Zones International Inc. All rights reserved. Unauthorized duplication is a violation of applicable laws. Apple, the Apple logo, Macintosh® and PowerBook® are registered trademarks of the Apple Computer, Inc.

The Mac Zone



Desktop

FREE 64MB RAM WITH EVERY

Drive off with this deal!

FREE* 64MB

HURRY!
While supplies last

FREE after Mfr Mail-in rebate. Memory price will be added to the cost of the G3 you select.

Order Item
#07972

BLOWOUT!

Outstanding performance at an unbeatable value!

Apple® Power Macintosh® G3/266MHz DT

While supplies last!

ONLY \$1599
#19050

OR LEASE FOR JUST \$59/Mo.*

266 MHz

32MB RAM

4.0GB Hard Drive

24x CD-ROM

WITH DVD!

The ONLY Apple Desktop with DVD!

Apple® Power Macintosh® G3/266MHz DT

Special Purchase!

ONLY \$1749
#07880

OR LEASE FOR JUST \$65/Mo.*

266 MHz

64MB RAM

4.0GB Hard Drive

DVD CD-ROM

56K FLEX MODEM

NEW!

Includes built-in video-in/out!

Apple® Power Macintosh® G3/300MHz MT

ONLY \$2399
#19054

OR LEASE FOR JUST \$89/Mo.*

300 MHz

64MB RAM

8.0GB Hard Drive

20x CD-ROM

NEW!

Includes a Zip Drive for fast storage and backup!

Apple® Power Macintosh® G3/300MHz DT

ONLY \$1999
#19051

OR LEASE FOR JUST \$74/Mo.*

300 MHz

64MB RAM

6.0GB Hard Drive

20x CD-ROM

NEW!

The ultimate in performance and flexibility at a great price!

Apple® Power Macintosh® G3/333MHz MT

ONLY \$2999
#19055

OR LEASE FOR JUST \$111/Mo.*

333 MHz

128MB RAM

9.0GB Hard Drive

24x CD-ROM

*Apple Business Lease: 36-month, fair-market value lease based on approved credit (\$1400 minimum lease amount). Other leasing options available. Call for details. Apple Commercial Credit is administered by Dana Commercial Credit Corporation.

PowerPC™ and the PowerPC logo™ are the trademarks of International Business Machines Corporation, used under license therefrom. **Extended service provided by a third party provider. Call for full details.

Monitors

76514	ViewSonic G5771 17" Monitors (16" View)	\$359.98
76513	Sony Multiscan 200ES 17" Monitors	\$379.98
76517	Sony Multiscan 100ES 15" Monitor	\$229.98
75914	ViewSonic Optique Q71 17" Monitor	\$249.98
76501	ViewSonic E771 17" Monitor	\$299.98
93755	Princeton 90 Ultra 19"/18" Monitor	\$479.98
03581	ViewSonic P5790 19"/18.25" SM 1600	\$615.98
46790	Sony Multiscan 200GS 17" Monitors	\$489.98
77049	AppleVision 720 17" Display	\$499.98
75956	Optique Q51 15" Monitor	\$169.98
78611	ViewSonic Optique Q53 15" Monitor	\$174.98
46794	Sony Multiscan 500PS 21" Monitors	\$1,199.00
52829	ViewSonic G771 17" Monitor	\$379.98
46793	Sony Multiscan 400PS 19" Monitors	\$829.98
03744	Optique V73 17"/16" 26 SM 1280	\$319.98
76535	Hitachi RasterOps Mc7515 19" Monitors	\$679.98
84147	Viewsonic G810 21" Color Monitor	\$999.98

Printers

31720	Epson Stylus 740	\$279.98
00576	Epson Stylus 850	\$349.98
80668	Epson Stylus 800	\$249.98
00575	Epson Stylus Photo 700	\$249.98
00583	Epson Stylus EX	\$499.98
40920	Epson Stylus 1520	\$499.98
40919	Epson Color 3000	\$1,399.00
57715	HP Deskjet 1120se Printer	\$598.98
82666	HP Laserjet 4000N Printer	\$898.98
53213	HP Laserjet 4000N Printer	\$1,449.00
57728	HP LaserJet 5000N Printer	\$2,059.00
57736	HP LaserJet 6000N Printer	\$2,639.00
85467	HP LaserJet 5M Color Printer	\$4,998.00
56568	Tektronix Phaser 360 Color Printer	\$3,695.00
49479	Tektronix Phaser 560 Color Printer	\$4,995.00
74757	Apple LaserWriter 6500	\$1,995.00
52857	Costar LabelWriter Turbo	\$249.98

Scanners

18516	Umax Astra 1220S SCSI Flatbed Scanners	\$149.98*
*After \$30 Mfr Mail-in Rebate. Low Zone Price \$179.98		
18354	Umax Astra 610s Flatbed Scanner	\$99.98*
*After \$20 Mfr Mail-in Rebate. Low Zone Price \$119.98		
18363	Umax Astra 1200s w/Photoshop LE	\$249.98*
*After \$50 Mfr Mail-in Rebate. Low Zone Price \$299.98		
72396	Microtek ScanMaker V6000 I/Mac	\$129.98
98653	Umax Astra 1200 w/Photo Dlx/PageManager	\$199.98*
*After \$50 Mfr Mail-in Rebate. Low Zone Price \$249.98		
40937	Umax Astra600/1200 Transparency Adapter	\$189.98
56912	Linotype Jade2 Full Photoshop 4.0	\$499.98
53990	Microtek ScanMaker V310 Flatbed Scanner	\$79.98
00540	Umax Astra 1220SP Transparency Adapter	\$199.98
18393	Umax Powerlook II w/PhotoshopLE	\$895.98*
*After \$200 Mfr Mail-in Rebate. Low Zone Price \$1,095.98		
58476	Linicolor Saphir w/TMA/VisualLab	\$1,099.00
02135	AGFA Arcus II Scanner w/Photo Shop 4.0	\$1,219.00

Processor upgrades

Powerbook Upgrades		
03512	NuPower G3 250MHz (PowerBook 1400)	\$999.98
03516	NuPower G3 240MHz (PowerBook 2400)	\$849.98
PowerMac Upgrades		
60439	MAXpower G3 220MHz/110	\$549.98
60408	MAXpower G3 250MHz	\$599.98
94400	MAXpower G3 333/166	\$1,249.00
94403	MAXpower G3 366/183	\$1,549.00
PowerMac G3 Upgrades		
94405	MAXpower G3 333/166	\$1,249.00
94406	MAXpower G3 366/183	\$1,549.00
94409	MAXpower G3 400/200	\$1,999.00
Sonnet Technologies		
03524	Crescendo G3 266MHz	\$799.98
03526	Crescendo G3 300MHz	\$999.98
78928	Crescendo G3 PowerPC 333MHz	\$1,059.00
78934	Crescendo G3 PowerPC 360MHz	\$1,799.00

we're open 24/7
hours a day
days a week

NO SURCHARGE ON CREDIT CARDS

Corporate bids welcome! Fax to 1-800-684-8080

1-800-436-0606 WWW.ZONES.COM

Source Code
MW812

A NASDAQ COMPANY Ticker Symbol: MZON

Delirium!

NEW G3 POWER MAC DESKTOP!



Open Windows Files on Your Mac. Instantly

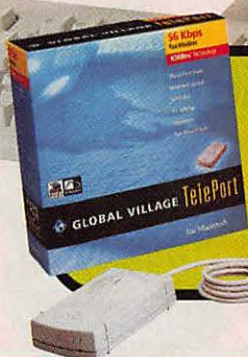
SAVE \$40

MacLink Plus DELUXE

when you purchase
MacLink Plus Deluxe
with any Macintosh Computer!
ONLY \$58⁹⁸



Monitor sold separately.



Global Village TelePort 56K V.90 Fax/modem
ONLY \$99⁹⁸
with purchase of any Power Mac Desktop or Minitower
Call for details!

G3 Power Macintosh® Series Memory Upgrades

SDRAM TYPE NEEDED	ITEM #	ONLY
16MB SDRAM	#54480	\$35.98
32MB SDRAM	#54481	\$74.98
64MB SDRAM	#54482	\$184.98
128MB SDRAM	#54483	\$356.98
VRAM 2MB SGRAM Upgrade	#53736	\$29.98
4MB SGRAM Upgrade	#53737	\$34.98

UPS/Power	
00933 APC Back-UPS 200	\$89.98
00931 APC Back-UPS 300	\$99.98
00930 APC Back-UPS 500	\$149.98
00929 APC Back-UPS 650	\$229.98
85595 APC Back-UPS Office	\$79.98
55744 PK Electronic BlackoutBuster UPS	\$99.98
00923 APC Back-UPS Pro 280	\$149.98
00925 APC Back-UPS Pro 420	\$209.98
00926 APC Back-UPS Pro 650	\$269.98
88537 APC Back-UPS Pro 1000	\$389.98
28827 APC Back-UPS Pro 1400	\$459.98
55740 APC Smart-UPS 420	\$269.98
55741 APC Smart-UPS 620	\$339.98
07165 APC Smart-UPS 700	\$368.98
40410 APC Smart-UPS 1000	\$519.98
40411 APC Smart-UPS 1400	\$649.98
40419 APC Smart-UPS 1400 Rack Mount	\$699.98

Networking	
91809 FriendlyNet AAUI to 10T Adapter	\$29.98
82092 FriendlyNet 8 Port 10T Desktop Hub	\$55.98
70490 AsanteFAST 10/100 PCI	\$46.98
82091 FriendlyNet 5 Port 10T Desktop Hub	\$49.98
87016 Asante MacCon CS 10T CommSlot	\$69.98
93330 Micro AsantePrint 10T	\$149.98
02505 Asante MCILC 10T LC PDS	\$84.98
91817 Asante 8 Port 10T Hub (AUI/BNC)	\$99.98
94143 Asante MCINB NuBus 10T/TK (RJ45/AUI)	\$109.98
16630 AsanteTalk 10T to LocalTalk	\$99.98
90294 Asante FriendlyNet Media Adapter TN	\$38.98
91818 Asante 12 Port 10T Hub (AUI/BNC)	\$149.98
91819 Asante 24 Port 10T Hub (AUI)	\$255.98
50793 FriendlyNet 8+2 Switch I/Small Networks	\$299.98
12290 AsanteFAST 10/100 Nubus	\$239.98
50794 FriendlyNet 8+2 Switch Plus I/Lrg Ntwrk	\$349.98
20305 Asante FriendlyNet Adapter 10T/TN	\$59.98
75010 FriendlyNet 100TX 8 Hub (8RJ45/1Uplink)	\$299.98

50517 IntraStack 6014DSB Switch 12 10/100	\$1,769.00
75009 FriendlyNet 100TX 5 Hub (5RJ45/1Uplink)	\$179.98
50728 Asante Mini AUI to 10FL Transceiver	\$189.98
50515 IntraSwitch 5324 24 Port 10T (1 10/100)	\$1,339.00
09414 AsanteFAST 10/100 PCI 5PK	\$229.98
93331 Micro AsantePrint 10T/TK/TN	\$159.98
03945 Asante Mini AUI to 10T Transceiver	\$69.98
33268 Apple Network Assistant	\$369.98
78312 AppleShare IP 6.0 upgrade	\$439.98
73952 PC MacLAN for NT	\$199.98
36083 PC MacLAN for Win 95/98	\$159.98

Call for your
FREE CATALOG!
All the latest computer products at discount prices!



Expect the Best!™
Low Prices • Selection • Expertise

If for any reason you are not satisfied,
please call our No Excuses Hotline: 1-800-258-0270.

1-800-436-0606

www.zones.com

Credit cards are not charged until the order is shipped. Most products ship the same day (barring system failure, etc.). Shipping options include Ground, 2nd Day and Overnight delivery. Freight is based on average product weight. Handling extra. Insurance available. Special orders may require special shipping and handling charges. Call for international shipping rates. Prices and product availability subject to change without notice. Specials and promotions may be limited to stock on hand. Not responsible for typographical errors.
©1998 Copyright Multiple Zones International Inc. All rights reserved. Unauthorized duplication is a violation of applicable laws. Apple, the Apple logo, Macintosh® and PowerBook® are registered trademarks of the Apple Computer, Inc.

The Mac Zone



Order with Confidence!

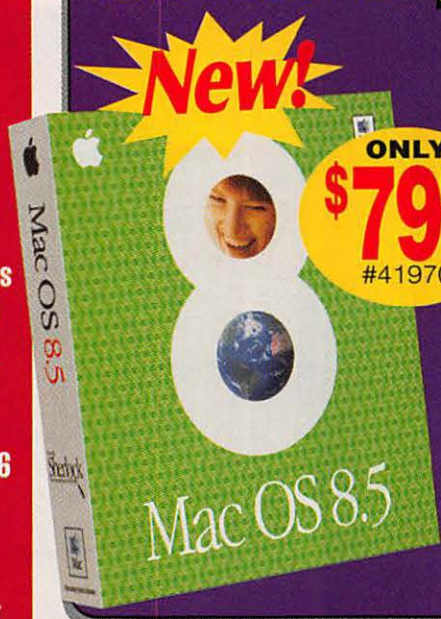
- Guaranteed Low Prices
- Shop and order Online
- Order 24 hours a day, 7 days a week
- Serving Mac enthusiasts since 1986
- Publicly traded NASDAQ company (MZON)
- Complete Mac product selection - call for product not listed
- Affordable leasing options
- Tech support and Customer Service

Check out
The Mac Zone's
BEST SELLING product!

Enhance &

Shop The Mac Zone for

OS 8.5 is Here!



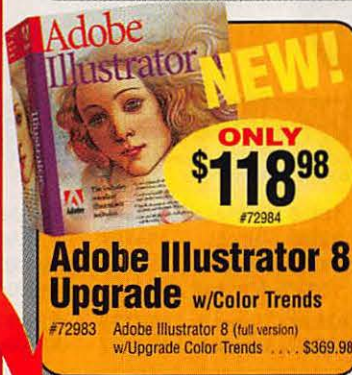
Get
Mac OS
8.5
for ONLY
\$79.98

with your \$100 (or more)
Mac Zone purchase!
Otherwise, get it for our
Low Zone Price of
\$89.98

Virtual PC 2.1 w/Windows 98



Hewlett-Packard Laserjet 6MP Printer



Adobe Illustrator 8 Upgrade w/Color Trends

#72983 Adobe Illustrator 8 (full version)
w/Upgrade Color Trends \$369.98



Global Village TelePort 56K v.90 Ext. Fax/Modem



Palm III Connected Organizer

Software

Business

55871	MS Office 98-Mac	\$449.98
55870	MS Office 98 Upgrade	\$259.98
93952	Adobe Acrobat 3.0.1	\$184.98
55872	MS Office 98 Upgrade Gold Edition Mac	\$359.98
55873	MS Office 98-Gold Edition Mac	\$539.98
75368	Claris Works Office	\$87.98
55868	MS Word 98 Upgrd - Mac	\$134.98
50930	Power Secretary Power Edition	\$285.98
04161	MS Project 4.0 For Mac	\$424.98
55869	MS Word 98 - Mac	\$364.98
06231	Act! 2.8 iMac	\$149.98
08582	Now UpToDate/Contact/Pblshr/Synze 3.65	\$88.98
03972	Corel WordPerfect 3.5.1	\$159.98
77964	PowerSecretary PersonalEd iClarisWorks	\$149.98
96801	Farallon Timbuktu Pro 4.0 Twin Pack	\$184.98
96676	Apple Remote Access Personal Server 3.0	\$115.98

Utilities

87067	Micromat TechTool Pro 2.0	\$94.98
77998	Connectix Virtual PC 2.0 95	\$149.98
20634	Connectix Virtual PC 2.1 98	\$138.98*
	*After \$30 Upgrade Rebate. Low Zone Price \$168.98	
02077	Virex 5.8	\$59.98
25006	Insignia Softwindows 98	\$159.98
90375	Speed Doubler 8 for Mac OS	\$54.98
05827	StuffIt Deluxe 5.0	\$59.98
00555	Hard Disk Toolkit 2.5	\$124.98
32550	Connectix Triple Pack: includes RAM Doubler 8, Speed Doubler 8, Surf Express Deluxe	\$84.98
32558	Retrospect 4.1	\$144.98
73702	RealPC	\$69.98
91300	Conflict Catcher 8	\$67.98
00642	PowerPrint 4.0	\$89.98
84048	RAM Doubler 8	\$45.98
00116	Norton AntiVirus 5.0	\$23.98*
	*After \$40 Mfr Mail-in rebate for upgraders	

Games

74149	Shanghai Dynasty	\$39.98
72741	Carmageddon	\$29.98
41484	Tomb Raider 2	\$48.98
34779	Myth 2	\$49.98
49279	DIABLO	\$46.98
82936	WarCraft/Battlechest	\$29.98
85760	Eric's Ultimate Solitaire	\$38.98
72734	Sim City: Special Edition	\$18.98
74846	FA 18-Hornet	\$44.98
07420	Civilization 2	\$28.98
53467	Deer Hunter	\$19.98
74847	Jack Nicholas 4	\$44.98
53465	Quake	\$27.98
07419	Real Pool	\$16.98
74166	Unreal	\$46.98
07427	Riven: The Sequel to Myst	\$39.98
60056	Extreme Mac 12-Pack	\$39.98
	Titanic	\$42.98

Education

90081	Baileys Book House	\$19.98
90082	Millie's Math House	\$19.98
35184	Math Munchers Deluxe	\$19.98
90003	The Way Things Work 2	\$26.98
505005	KidDesk Internet Safe	\$26.98
90034	Grammer Games	\$29.98
74175	Math Blaster Algebra	\$29.98
74177	Math Blaster Pre Algebra	\$29.98
71234	Looking and Thinking	\$29.98
74251	Professor Finkle's Times Table Factory	\$29.98
71251	Mavis Beacon Teaches Typing 9.0	\$36.98
80635	Family Tree Maker Deluxe II	\$79.98
60197	ADAM Deluxe: The Inside Story	\$39.98
74199	Oregon Trail 3	\$49.98
77404	Design your Own Home3D Walkaround	\$69.98
79710	Encyclopedia Britannica 1999 CD	\$69.98
05984	Reunion 5.0: Family Tree	\$99.98
46434	Complete National Geographic: 109 Years	\$174.98

Corporate bids welcome! Fax to 1-800-684-8080

1-800-436-0606 WWW.ZONES.COM

Source Code
MW812

A NASDAQ COMPANY Ticker Symbol: MZON

we're open
24/7
hours a day
7 days a week



Expand Your Mac!

Low Prices, Selection and Expertise!

Stuffit Deluxe 4.5

ONLY \$74⁹⁸
#05827



Microsoft Office 98 Upgrade

ONLY \$259⁹⁸
#55870



ViewSonic E771 17" (16" viewable) Monitor

ONLY \$299⁹⁸
#76501



NEW! ONLY \$49⁹⁸
#34779

Myth II: Soulblighter



Sony Mavica FD81 3x optical zoom

ONLY \$799⁹⁸
#93849

w/FREE 10-Pack of Sony floppy disks!



QuarkXPress 4.0

ONLY \$698⁹⁸
#95320

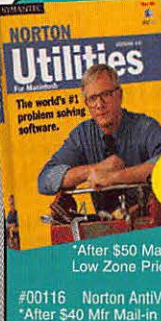


Norton Utilities 4.0

ONLY \$46⁹⁸*
#04890

*After \$50 Mail-in rebate for upgraders. Low Zone Price \$96.98

#00116 Norton AntiVirus 5.0 \$23.98*
*After \$40 Mfr Mail-in rebate for upgraders. Low Zone Price \$63.98



newer technology

G3 Upgrades

Mac Zone Exclusive!

Newer G3 PPC 275/138 512K backside

ONLY \$599⁹⁸
#28866

#60416 Newer MAXpower G3 f/Mac6100 240MHz/1MB **\$699.98**

#60418 Newer MAXpower G3 f/Mac7100 8100 240MHz **\$799.98**



NEC LCD 400v 14" Monitor

ONLY \$969⁹⁸
#08596

XtraView™ wide-viewing - angle technology!



Microtek ScanMaker X6 36-bit Scanner

\$20 Rebate

ONLY \$129⁹⁸*
#90812

*After \$20 Mail-in rebate. Low Zone Price \$149.98. Offer expires 11/30/98



Epson 640 Color Printer

ONLY \$199⁹⁸
#57149



Internet		Graphics			
53594	Macromedia Dreamweaver & Fireworks Bundle	\$398.98	83084	Adobe Photoshop 5.0 Upgrade	\$184.98
53593	Macromedia Fireworks Trade Up	\$198.98	95320	QuarkXPress 4.0	\$698.98
77533	Macromedia Flash 3 Upgrade	\$98.98	88205	Adobe Illustrator 8.0 Upgrade	\$118.98
73486	Macromedia Dreamweaver	\$298.98	71273	Adobe Graphic Studio	\$988.98
93952	Adobe Acrobat 3.0.1	\$184.98	83068	Adobe PageMaker 6.5 Upgrade	\$124.98
77546	Adobe ImageReady	\$199.98	84242	Macromedia FreeHand 8	\$148.98
14182	Adobe ImageStyle	\$128.98	86007	Macromedia Director 6.5 Multimedia Studio Upd	\$498.98
88414	Adobe PageMill 3.0	\$98.98	77545	QuarkXPress 4.0 & QuarkImmedia Bundle	\$974.98
71964	NetObjects Fusion 3.0 Upgrade	\$98.72	95334	Adobe Premiere 5.0 Upgrade	\$189.98
71916	GoLive CyberStudio 3.1 Professional Edition	\$289.98	71172	CorelDraw 8.0 Suite Upgrade	\$99.98
76471	Bare Bones SW BBEdit 4.5	\$99.98		*After \$50 Upgrade Rebate. Low Zone Price	\$149.98
71925	DeMorgan WebSpice Animation	\$79.98	77537	Director 6.5 Upgrade from 6.0	\$198.98
83320	Microsoft FrontPage	\$139.98	83930	Adobe Type Manager Deluxe 4.0	\$64.98
71243	PANTONE ColorSuite for Internet	\$74.98	89657	PANTONE Color Survival Kit	\$154.98
46740	Totally Hip Web Painter	\$72.87	72981	Metacore Painter 5.5	
71945	Wootech Voyager Professional Edition 2.5	\$99.98		Web Edition Upgr from 5.0	\$74.98
71925	WebSpice Animations	\$79.98	53567	Metacore Painter 5.5 Web Ed Full ver.	\$279.98
46747	WebSpice 1,000,000	\$79.98	59682	Kai's SuperGoo	\$44.98

Credit cards are not charged until the order is shipped. Most products ship the same day (barring system failure, etc.). Shipping options include Ground, 2nd Day and Overnight delivery. Freight is based on average product weight. Handling extra. Insurance available. Special orders may require special shipping and handling charges. Call for international shipping rates. Prices and product availability subject to change without notice. Specials and promotions may be limited to stock on hand. Not responsible for typographical errors.

©1998 Copyright Multiple Zones International Inc. All rights reserved. Unauthorized duplication is a violation of applicable laws. Apple, the Apple logo, Macintosh® and PowerBook® are registered trademarks of the Apple Computer, Inc.

The Mac Zone

Expect the Best!™
Low Prices • Selection • Expertise

If for any reason you are not satisfied, please call our No Excuses Hotline: 1-800-258-0270.

1-800-436-0606 **WWW.ZONES.COM**

Call for your FREE CATALOG!

MORE WAYS TO SAVE!

All the latest computer products at discount prices!



ULTRA SCSI

					Int	Ext
2111MB	5400rpm	512K	FB32100S	3yr	\$199	\$259
3228MB	5400rpm	512K	FB33200S	3yr	\$235	\$295
4310MB	5400rpm	512K	FB34300S	3yr	\$269	\$329
6448MB	5400rpm	512K	FB36400S	3yr	\$350	\$410
8455MB	5400rpm	512K	FB38400S	3yr	\$455	\$515
9100MB	7200rpm	1024K	XP309100S	5yr	\$519	\$579
18200MB	7200rpm	1024K	XP318200S	5yr	\$999	\$1059

ULTRA WIDE SCSI

4550MB	7200rpm	512K	VK304550W	5yr	\$289	\$379
9100MB	7200rpm	512K	VK309100W	5yr	\$489	\$579

ULTRA 2 SCSI

4550MB	7200rpm	512K	VK304550LW	5yr	\$289	\$389
9100MB	7200rpm	512K	VK309100LW	5yr	\$489	\$589
1000MB	7200rpm	1024K	XP309100LW	5yr	\$519	\$619
18200MB	7200rpm	1024K	XP318200LW	5yr	\$999	\$1099

MegaHaus is the first company to sell the new Quantum Approved Audio Visual drives specifically tuned to meet demanding A/V applications.

ULTRA 2 SCSI A/V (Minimum sustained 10MB/sec)

4550MB	7200rpm	512K	VK304550LV4	5yr	\$139	\$419
9100MB	7200rpm	512K	VK309100LV4	5yr	\$519	\$619
18200MB	7200rpm	1024K	XP318200LV4	5yr	\$1029	\$1129

We are the #1 source for Quantum

Capacity for the Extraordinary



The professional's choice for backup. We will not be undersold on Quantum DLT Tape drives!

Native	Compressed	Internal	Table Top	Rack Mount
20GB	40GB	\$2300 DLT4000	\$2575 DLT4000X	n/a
35GB	70GB	\$5350 DLT7000	\$5625 DLT7000X	n/a
100GB	200GB	n/a	\$3879 DLT4500	\$3769 DLT4500R
140GB	280GB	n/a	\$5589 DLT4700	\$5389 DLT4700R
280GB	560GB	n/a	\$10,499 DLT4114LST	\$10,199 DLT4114LSR
490GB	980GB	n/a	\$13,999 DLT7114ST	\$13,699 DLT7114SR

Call for Differential SCSI models, and DLTstor products. Call for the best prices in the industry on DLT media

CD RECORDERS

Smart Storage Solutions CDR Drives Include:

- ✓ Toast Mastering Software
- ✓ 5 FREE disks
- ✓ Toll Free support



Includes Toast & DirectCD Software!

DirectCD from Adaptec now makes a CD Recorder as easy to use as a hard drive.

4x8 CDR \$299



Compare our price and you will see we are the #1 source for CD Recorders!

CD RECORDABLE Includes 5 Free Recordable Disks!

	Internal	External
4x6 Yamaha mechanism, tray load, 2MB buffer	\$289	\$349
4x8 Matsushita (Panasonic) mechanism, tray load, 1MB buffer	\$265	\$325
4x12 Teac mechanism, tray load, 1MB buffer	\$379	\$439
4x12 Plextor mechanism, caddy/tray load, 2MB buffer	\$389	\$449
NEW 8x20 tray load, 2MB buffer	\$779	\$839

PRICE BREAKTHRU

CD REWRITABLE Includes 5 Free Rewritable Disks!

4x2x6 Yamaha mechanism, tray load, 2MB buffer	\$359	\$419
MacWorld Special external with only 1 CD-RW disk (SSS4X2X6XM1)	\$329	\$399
NEW 4x4x16 Yamaha mechanism, tray load, 2MB buffer	\$399	\$459
CD-RW starter pack with 5 CD-RW disks and 10 CD-R disks (CDSTARTER)	\$75	

Stomper CD label kit only \$39 with CD-R drive!

Fargo Signature CD Printer \$999	CD Duplicators Call for price.	CDStomper label kit \$49	Toast retail package \$89	100 CD-RW w/drive \$120	50 CD-RW w/drive \$499
----------------------------------	--------------------------------	--------------------------	---------------------------	-------------------------	------------------------

Duo Master is one of the most innovative CD mastering solutions available. The solution provides a hard drive, Jaz or Syjet drive and CDR in one unit. Create your master on the hard drive, Jaz or Syjet cartridge drive and then master directly to the CD. This is the perfect CD mastering setup! Includes 5 free recordable CDs (5 CD-RWs with CD-RW drives) and 1 free cartridge with Jaz or Syjet unit. Add these prices to the internal prices above.

Quantum 2GB (DUO2GBM) \$270 Quantum 4GB (DUO4GBM) \$340
Jaz 1GB (DUO1GBJAZM) \$325 Jaz 2GB (DUO2GBJAZM) \$399
Syjet 1.5GB (DUOSYJETM) \$319

All-in-one CD Mastering



SCSI HARD DRIVES



					Internal	External
4520MB	7200rpm	512K	ST34520N	3yr	\$255	\$315
4550MB	7200rpm	512K	ST34573N	5yr	\$455	\$515
6530MB	7200rpm	512K	ST36530N	3yr	\$360	\$420
9140MB	7200rpm	512K	ST39140N	3yr	\$465	\$525
9190MB	7200rpm	1024K	ST39173N	5yr	\$525	\$585
18200MB	7200rpm	1024K	ST118273N	5yr	\$1019	\$1079
ULTRA WIDE SCSI						
4520MB	7200rpm	512K	ST34520W	3yr	\$270	\$360
4550MB	7200rpm	512K	ST34573W	5yr	\$450	\$540
6530MB	7200rpm	512K	ST36530W	3yr	\$360	\$450
9140MB	7200rpm	512K	ST39140W	3yr	\$465	\$555
9190MB	7200rpm	1024K	ST39173W	5yr	\$525	\$615
18200MB	7200rpm	1024K	ST118273W	5yr	\$1019	\$1109
ULTRA 2 SCSI						
4550MB	7200rpm	1024K	ST34573LW	5yr	\$475	\$585
4550MB	10,000rpm	1024K	ST34502LW	5yr	\$520	\$630
9100MB	10,000rpm	1024K	ST39102LW	5yr	\$690	\$800
9190MB	10,000rpm	1024K	ST39173LW	5yr	\$545	\$655
18200MB	7200rpm	1024K	ST118273LW	5yr	\$1039	\$1149
18200MB	10,000rpm	1024K	ST118202LW	5yr	\$1295	\$1405



4550MB	5400rpm	512K	IBM34560N	5yr	\$275	\$335
9100MB	7200rpm	512K	IBM39130N	5yr	\$500	\$560
18200MB	7200rpm	1MB	IDGHS18Z	5yr	\$1025	\$1085
ULTRA WIDE SCSI						
4550MB	5400rpm	512K	IBM34560W	5yr	\$275	\$365
9100MB	7200rpm	512K	IBM39130W	5yr	\$525	\$615
9100MB	10020rpm	1MB	IDVGS9U	5yr	\$589	\$679
18200MB	7200rpm	1MB	IDGHS18U	5yr	\$1025	\$1115
ULTRA-2 SCSI						
9100MB	7200rpm	512K	IBM39130U2	5yr	\$525	\$635
18200MB	7200rpm	1MB	IDGHS18U2	5yr	\$1050	\$1160



ULTRA WIDE SCSI						
4550MB	10,000rpm	512K	M3045WP	5yr	\$409	\$499
9100MB	7200rpm	512K	M3091WP	5yr	\$499	\$589
9100MB	10,000rpm	512K	M3091WP	5yr	\$659	\$749
18200MB	7200rpm	512K	M3182SW	5yr	\$1029	\$1119

CD ROM DRIVES

	Internal	External
16X - 5 disc changer	MJS16M/XM \$189	\$249
32X - Slot load	DRX32SM/XM \$90	\$150
32X - Tray load	XM6201BM/XM \$105	\$165
32X - 512K buffer	PX32TSM/XM \$148	\$208
36X - Slot load	DRU706M/XM \$95	\$155

MISCELLANEOUS

IOMEGA 1GB Jaz	JAZZ	\$269
IOMEGA 2GB Jaz	JAZZX	\$339
SYQUEST 1.5GB Ask about rebate	SYJET1.5MAC	\$279
ADAPTEC Controllers		
PCI Wide Single Channel	A2940MUW	\$245
PCI Wide Dual Channel	A3940MUW	\$469
PCI FireWire + Wide SCSI	AHA8945	\$559
PCI Ultra 2	A2940MU2W	\$399
ATTO Controllers		
PCI Fibre Channel	ATTOPCFC	\$889
PCI Ultra 2 SCSI	ATTOPCIU2	\$425
above w/ RAID software & cable	ATTOPCIU2K	\$609
E4 Cool DVD Kit		
Complete kit for Mac G3 computers	DVDMAC	\$399
Maxoptix Optical Drives		
2.6GB	T5-2600	\$1149
5.2GB	T6-5200	\$1499
Sony Optical Drives		
5.2GB	SMOF551	\$1599
Fujitsu Optical Drives		
640MB (ask about mail in offer)	DYNAMO640SE	\$329

RAID



These preconfigured RAID's can be run in RAID 0 or 1 mode. The capacity listed is for RAID 0 configuration. In RAID 0, the data is striped across a pair of drives. This is perfect for digital video such as Media 100, TrueVision, Avid, or other applications that require extremely high data transfer rates.

Includes - Ultra 2 LVD SCSI drives - Adaptec PCI Ultra-2 SCSI controller - Adaptec Remus Lite RAID software - Necessary cables

Fixed	Removable
18GB 7,200rpm	2 9.1GB Quantum Viking drives \$1839 \$1639
18GB 7,200rpm	2 1.0GB Quantum Atlas drives \$1999 \$1799
18GB 7,200rpm	2 9.1GB Seagate Barracuda drives \$1999 \$1799
18GB 10,000rpm	2 9.1GB Seagate Cheetah drives \$2289 \$2089
36GB 7,200rpm	2 18GB Quantum Atlas drives \$2949 \$2749
36GB 7,200rpm	2 18GB Seagate Barracuda drives \$3049 \$2849
36GB 10,000rpm	2 18GB Seagate Cheetah drives \$3599 \$3399

NETWORK READY CD TOWER



Connects directly to your Ethernet network. Easy to install. Auto switches between 10 and 100Mbps networks. Also has built-in http support for easy connection to Internet. Includes 8 32X drives SSS32X8N \$1699

Since 1987
The Drive Authority



1-800-786-1184

Sales lines open: M-F 8-8 Sat 9-3 CST

Choose 229 at www.macworld.com/getinfo

2201 Pine Drive, Dickinson, Texas 77539

(281)534-3919 FAX (281)534-6580

<http://www.megaHaus.com>

Prices & specifications subject to change without notice. Shipping charges are nonrefundable. Returns must be in new condition and in original packaging. Defaced items may not be returnable. No refunds on software or special orders (items not listed in ad.) All returns subject to 15% restocking fee. All trademarks are registered trademarks of their respective companies. Personal checks held for clearance. We reserve the right to refuse any sale for any reason. Bundle price good only if sold at price. All warranties listed are manufacturer's warranty only. ©1998 MegaHaus Inc.

Seagate Barracuda
4.5GB \$525
(ST3457N) External: \$585
4.5GB Wide \$555
(ST3457W) External: \$545
9.1GB Wide \$639
(ST3917W) External: \$729
18.2GB Wide \$1175
(ST11827W) External: \$1265
7200rpm 512k buffer 7.1ms Seek

Seagate Cheetah
4.5GB \$425
(ST34501W) External: \$485
4.5GB Wide \$585
(PDST34501W) External: \$675
9.1GB \$795
(PDST19101N) External: \$855
9.1GB Wide \$789
(PDST39102LV) External: \$879
18.2GB Wide \$1399
(ST118202LV) External: \$1489
10000rpm 1024k buffer 5.9ms Seek

Quantum Atlas II
2.2GB Narrow/Wide \$195
(Q32275 & Q32275W) External: \$255 Wide External: \$285
4.5GB Narrow/Wide \$285
(Q34550N/W) External: \$345 Wide Ext: \$375
9.1GB \$465
(Q39100) External: \$525
7200rpm 1024k buffer 7.9ms Seek

Seagate Medalist
4.5GB Narrow/Wide \$289
(ST34520N/W) External: \$359 Wide Ext: \$379
6.5GB Narrow/Wide \$389
(ST36530N/W) External: \$449 Wide Ext: \$479
9.1GB Narrow/Wide \$519
(ST39140N/W) External: \$569 Wide Ext: \$609
7200rpm 512k buffer 8.5ms Seek

Seagate Elite
23GB \$1795
(ST423451) External: \$1895
23GB Wide \$1845
(ST423451W) External: \$1945
47GB Wide \$3995
(ST463451W) External: \$4195
5400rpm 2048k buffer 11ms Seek

Quantum Stratus
3.2GB \$235
External: \$305
6.4GB \$355
External: \$425
8.4GB \$475
External: \$545
5400rpm 512k buffer 9.5ms Seek

Seagate UltraStar ZX
9.1GB Wide \$625
(39100W) External: \$715
10020rpm 1024k buffer 6.5ms Seek

Quantum Atlas III
9.1GB Wide \$695
(AL309100LV) External: \$785
18.2GB Wide \$1165
(AL318200LV) External: \$1255
7200rpm 1024k buffer 7.5ms Seek

Quantum Viking II
4.5GB Wide \$269
(PX34550LV) External: \$359
9.1GB Wide \$499
(PX39100LV) External: \$589
7200rpm 1024k buffer 8ms Seek

ES Value! UltraStar ES
108GB \$145
(DFHS31080S) External: \$195
2.1GB Wide \$215
(DCAS32160W) External: \$295
4.3GB \$275
(DCAS34330S) External: \$335
4.3GB Wide \$295
(DCAS34330W) External: \$385
5400rpm 512k buffer 9.9ms Seek

Seagate Barracuda
4.5GB \$525
(ST3457N) External: \$585
4.5GB Wide \$555
(ST3457W) External: \$545
9.1GB Wide \$639
(ST3917W) External: \$729
18.2GB Wide \$1175
(ST11827W) External: \$1265
7200rpm 512k buffer 7.1ms Seek

Seagate Cheetah
4.5GB \$425
(ST34501W) External: \$485
4.5GB Wide \$585
(PDST34501W) External: \$675
9.1GB \$795
(PDST19101N) External: \$855
9.1GB Wide \$789
(PDST39102LV) External: \$879
18.2GB Wide \$1399
(ST118202LV) External: \$1489
10000rpm 1024k buffer 5.9ms Seek

Quantum Atlas II
2.2GB Narrow/Wide \$195
(Q32275 & Q32275W) External: \$255 Wide External: \$285
4.5GB Narrow/Wide \$285
(Q34550N/W) External: \$345 Wide Ext: \$375
9.1GB \$465
(Q39100) External: \$525
7200rpm 1024k buffer 7.9ms Seek

Seagate Medalist
4.5GB Narrow/Wide \$289
(ST34520N/W) External: \$359 Wide Ext: \$379
6.5GB Narrow/Wide \$389
(ST36530N/W) External: \$449 Wide Ext: \$479
9.1GB Narrow/Wide \$519
(ST39140N/W) External: \$569 Wide Ext: \$609
7200rpm 512k buffer 8.5ms Seek

Seagate Elite
23GB \$1795
(ST423451) External: \$1895
23GB Wide \$1845
(ST423451W) External: \$1945
47GB Wide \$3995
(ST463451W) External: \$4195
5400rpm 2048k buffer 11ms Seek

Quantum Stratus
3.2GB \$235
External: \$305
6.4GB \$355
External: \$425
8.4GB \$475
External: \$545
5400rpm 512k buffer 9.5ms Seek

Seagate UltraStar ZX
9.1GB Wide \$625
(39100W) External: \$715
10020rpm 1024k buffer 6.5ms Seek

Quantum Atlas III
9.1GB Wide \$695
(AL309100LV) External: \$785
18.2GB Wide \$1165
(AL318200LV) External: \$1255
7200rpm 1024k buffer 7.5ms Seek

Quantum Viking II
4.5GB Wide \$269
(PX34550LV) External: \$359
9.1GB Wide \$499
(PX39100LV) External: \$589
7200rpm 1024k buffer 8ms Seek

ES Value! UltraStar ES
108GB \$145
(DFHS31080S) External: \$195
2.1GB Wide \$215
(DCAS32160W) External: \$295
4.3GB \$275
(DCAS34330S) External: \$335
4.3GB Wide \$295
(DCAS34330W) External: \$385
5400rpm 512k buffer 9.9ms Seek

Plug in a PowerRAID™

for Maximum Data Transfer Rates

There's no easier way to get the affordability and enormous benefits of a speed-tuned™ disk array storage system!

All PowerRAIDs are ready to use. Plug and Play and include: Pre-Configured Adaptec 2940 Ultra Wide Accelerator (Also available with Multi Channel, RAID-Tuned Hard Drives, RAID Controller Enclosures and "Raid" Software. And, all components are covered by a 3 year 48 hour replacement warranty.

Seagate Barracuda
PowerRAID with proven Barracuda technology recommended for use with most video editing systems

Seagate Cheetah
Featuring the Awesome Transfer Rates of 10,000 RPM Seagate Cheetah Drives

PowerRAID	Fixed	Removable
PowerRAIDSB18	\$2195	\$2385
PowerRAIDSB36	\$3980	\$4175
PowerRAIDSB72	\$7295	\$7695
PowerRAIDSB144	\$14450	\$15185
PowerRAIDSC18	\$2695	\$2895
PowerRAIDSC36	\$4750	\$4945
PowerRAIDSC72	\$8855	\$9245
PowerRAIDSC144	\$17495	\$18295

HOP UP YOUR HARD DRIVE WITH THE RIGHT SCSI ACCELERATOR CARD!

Ultra SCSI Single Channel PCI

PowerDomain 2940

\$245

Adaptec

Ultra SCSI Dual Channel PCI

PowerDomain 3940

\$425 UP TO 40 MB/Sec.

Adaptec

Dual Channel Express PCI

TO 40 MB/Sec. **\$589**

Adaptec

Ultra 2 LVD Single Channel PCI

BACKWARDS COMPATIBLE WITH EXISTING SCSI & ULTRA SCSI

PowerDomain 2940 U2W

\$495

Adaptec

DVD, CDR & CD DRIVES

DVD-RAM Drive \$795

2X ReWritable DVD-RAM Drive, Stores up to 5.2GB/Media, 20X CD Reader, Reads CDROM, CD-R and CDRW!

CD Rom Drives

Pioneer 32x CD ROM \$145

NEC 24x CD ROM \$135

CD Server Tower

Locate 8 CD Drives at only one SCSI address!

CD Dataseeker 832 NEC 8 32X \$3195

FWB CD-ROM TOOLKIT INCLUDED WITH CD DRIVES

CD Recorders

Yamaha CRW4260 YAMAHA \$495

2XCD Re-Writable 4XRecorder 6X Reader with HUGIE 2 Mb Buffer.

Panasonic CDR 7502 4X8X 4 Speed Recorder/8 Speed Player Huge 2 MB Buffer

\$415

FREE TOAST SOFTWARE INCLUDED WITH ALL CDR'S

MEMORY DEALS

HIGHEST QUALITY APPLE CERTIFIED WITH LIFETIME WARRANTY

32MB 64MB 128MB

PowerBook WallStreet G3 \$71 \$125 \$245

PowerMac G3 SDRAM \$40 \$92 \$185

PowerBook 168pin DIMM \$48 \$76 \$275

72pin SIMM 16MB-\$21 32MB-\$42

www.pdisales.com

Quickly find and order it now on our website!

TAPE BACKUP

IN STOCK TODAY

Speedy Tape Drives Perfect for ANY Work or Server

4-GB 8000 QIC \$355

Seagate

ON THE FLY INSTANT BACKUP!

CAPACITY	MODEL	TRANSFER RATE	SALE
8 GB	HP 1599	90 MB/Min.	1145
8 GB	CTD8000	60 MB/Min.	795
8 GB	Sony 7000	90 MB/Min.	975
24 GB	HP1554 DDS3	120 MB/Min.	1445
24 GB	Sony 9000 DD3	120 MB/Min.	1195
30 GB	DLT™ 2000XT	150 MB/Min.	1995
40 GB	DLT™ 4000	180 MB/Min.	2875
48 GB	HP1553 DDS2	60 MB/Min.	2485
50 GB	Sony AIT 9960	120 MB/Min.	2975
70 GB	DLT™ 7000	600 MB/Min.	6375
144 GB	HP1559 DDS3	120 MB/Min.	3395
150 GB	DLT™ 2500XT	150 MB/Min.	4895
210 GB	DLT™ 2700XT	150 MB/Min.	6535
200 GB	DLT™ 4500	180 MB/Min.	6525
280 GB	DLT™ 4700	180 MB/Min.	7995

RETROSPECT 4.0 SOFTWARE INCLUDED WITH ALL TAPE DRIVES

APS HIGH-PERFORMANCE ULTRA SCSI DRIVES

Model	Description	EL	Internal	Pro
APS Q 2000	Quantum Fireball ST, 2079MB, 5400 rpm	\$209 ⁹⁵	\$219 ⁹⁵	\$279 ⁹⁵
APS Q 3000	Quantum Fireball ST, 3118MB, 5400 rpm	229 ⁹⁵	239 ⁹⁵	299 ⁹⁵
APS Q 4000	Quantum Fireball ST, 4110MB, 5400 rpm	269 ⁹⁵	279 ⁹⁵	339 ⁹⁵
APS ST 4000	Seagate Medalist Pro, 4340MB, 7200 rpm	299 ⁹⁵	309 ⁹⁵	389 ⁹⁵
APS I 4500	IBM Ultrastar 9ES, 4357MB, 7200 rpm	299 ⁹⁵	309 ⁹⁵	389 ⁹⁵
APS ST 6000	Seagate Medalist Pro, 6348MB, 7200 rpm	389 ⁹⁵	399 ⁹⁵	419 ⁹⁵
APS Q 6400	Quantum Fireball ST, 6236MB, 5400 rpm	359 ⁹⁵	369 ⁹⁵	419 ⁹⁵
APS Q 8000	Quantum Fireball ST, 8191MB, 5400 rpm	459 ⁹⁵	469 ⁹⁵	529 ⁹⁵
APS I 9000	IBM Ultrastar 9ES, 8715GB, 7200 rpm	579 ⁹⁵	589 ⁹⁵	649 ⁹⁵
APS ST 9000	Seagate Medalist Pro, 8683MB, 7200 rpm	499 ⁹⁵	509 ⁹⁵	599 ⁹⁵
APS I 18000	IBM Ultrastar 18XP, 17501GB, 7200 rpm	1,199 ⁹⁵	1,209 ⁹⁵	1,299 ⁹⁵
APS Q 18000	Quantum Fireball ST, 17366MB, 7200 rpm	1,159 ⁹⁵	1,169 ⁹⁵	1,249 ⁹⁵

HIGH-PERFORMANCE ULTRA WIDE SCSI DRIVES

Model	Description	EL	Internal	Pro
APS ST 4000 W	Seagate Medalist Pro, 4340MB, 7200 rpm	\$299 ⁹⁵	\$309 ⁹⁵	\$389 ⁹⁵
APS Q 4300 W	Quantum Fireball ST, 4240MB, 7200 rpm	319 ⁹⁵	329 ⁹⁵	399 ⁹⁵
APS I 4500 W	IBM Ultrastar 9ES, 8715GB, 7200 rpm	299 ⁹⁵	309 ⁹⁵	399 ⁹⁵
APS ST 6000 W	Seagate Medalist Pro, 6348MB, 7200 rpm	389 ⁹⁵	399 ⁹⁵	419 ⁹⁵
APS I 9000 W	IBM Ultrastar 9ES, 8715GB, 7200 rpm	579 ⁹⁵	589 ⁹⁵	649 ⁹⁵
APS ST 9000 W	Seagate Barracuda, 8683MB, 7200 rpm	649 ⁹⁵	659 ⁹⁵	699 ⁹⁵
APS I 9100 W	IBM Ultrastar 9ZX, 8706GB, 10,000 rpm	689 ⁹⁵	699 ⁹⁵	769 ⁹⁵
APS I 18000 W	IBM Ultrastar 18XP, 17501GB, 7200 rpm	1,199 ⁹⁵	1,209 ⁹⁵	1,299 ⁹⁵
APS Q 18000 W	Quantum Fireball ST, 17366MB, 7200 rpm	1,159 ⁹⁵	1,169 ⁹⁵	1,249 ⁹⁵

HIGH-PERFORMANCE ULTRA2 WIDE SCSI DRIVES

Model	Description	Internal	Pro
APS ST 9000 U2W	Seagate Medalist Pro, 8683MB, 7200 rpm	\$659 ⁹⁵	\$749 ⁹⁵
APS ST 9100 U2W	Seagate Cheetah, 8842MB, 10,000 rpm	779 ⁹⁵	879 ⁹⁵
APS ST 18000 U2W	Seagate Cheetah, 18200MB, 10,000 rpm	1,299 ⁹⁵	1,379 ⁹⁵

APS IDE DRIVES

Model	Description	Internal
APS 2000 ATA	Quantum Fireball SE, 2014MB, 5400 rpm	\$129 ⁹⁵
APS 3000 ATA	Quantum Fireball SE, 3118MB, 5400 rpm	149 ⁹⁵
APS 4000 ATA	Quantum Fireball SE, 4136MB, 5400 rpm	159 ⁹⁵
APS 6400 ATA	Quantum Fireball SE, 6236MB, 5400 rpm	199 ⁹⁵
APS 8000 ATA	Quantum Fireball SE, 8063MB, 5400 rpm	249 ⁹⁵

APS REMOVABLE DRIVES

Model	Description	EKO	SR 2000	Pro
APS Jaz II	(with 1 cartridge) 2GB	N/A	N/A	\$399 ⁹⁵
Jaz II EKO	In EKO case 2GB	\$299 ⁹⁵	N/A	N/A

APS MO DRIVES

Model	Description	Internal	Pro
APS 640 MO	Fujitsu M2513A23N	N/A	\$349 ⁹⁵
APS 5.2GB MO	Sony SMO-F551, 5.2GB	\$1,769 ⁹⁵	1,849 ⁹⁵

APS CD-ROM/CD-R/CD-RW DRIVES & MASTERING SYSTEMS

Model	Description	External
APS CD32	32X CD-ROM in Slimline Case	\$149 ⁹⁵
APS CD Changer	Nakamichi 5 Disc/16X CD-ROM, Pro Case only	259 ⁹⁵
APS CD-R 4X8S	4X record/8X read CD-R in Pro Enclosure	389 ⁹⁵
APS CD-RW	2X record/2X rewrite/6X read CD-RW in Pro Enclosure	399 ⁹⁵
APS CD-RW Pro	4X record/4X rewrite/16X read CD-RW, Pro Enclosure	599 ⁹⁵
APS Jaz II/CD-RW Sys.	Jaz 2GB & 4X record/2X rewrite/16X read CD-RW, Full Height Encl.	979 ⁹⁵

APS TAPE BACKUP SYSTEMS

Model	Description	Internal	External
APS HyperDAT®	DDS-2DC, 8GB	\$549 ⁹⁵	\$599 ⁹⁵
APS HyperDAT® Pro	DDS-2DC, 8GB	749 ⁹⁵	799 ⁹⁵
APS HyperDAT® III	DDS-3DC, 24GB	999 ⁹⁵	1,079 ⁹⁵
APS Mini Library	4mm DDS-2 AutoLoader, 64GB	N/A	2,399 ⁹⁵
APS DLT40	DLT 4000, 40GB	N/A	2,679 ⁹⁵
APS DLT70	DLT 7000, 70GB	N/A	5,999 ⁹⁵
APS AIT*	8mm W/DC, 50GB	N/A	2,399 ⁹⁵

*See our Adapter, Power/Density 2940 Ultra Wide SCSI Host Adapter offer to gain maximum throughput. Call for information about Windows 95 and Windows NT versions of these great drive products.

Order online @ <http://www.apstech.com/mwsspecial/>

Call today, burn tomorrow

APS CD-RW

- In stock, ready to ship
- 2X record/2X rewrite/6X read speeds
- Includes complete Mac/PC CD recording software



The APS CD-RW is ready and waiting for you. This 2x/2x/6x rewritable CD drive is improved by the APS Pro enclosure. You get exclusive DATerm® (digital active termination) built-in, so all of your SCSI devices play nice together. Plus, your drive is protected from, well, burning up, thanks to our patented IC'E technology. No competitor's CD-RW has these features. So don't settle for less. And don't wait any longer. Call now.

\$399⁹⁵

APS Pro enclosure

APS CD-R 8X20 \$649⁹⁵

- You-gotta-be-kidding-me fast CD burner
- Stays cool in APS Pro
- Includes complete Mac/PC software

APS Pro enclosure

APS I 4500 W \$299⁹⁵

- 7200 rpm IBM Ultrastar ES with 4.5GB
- Top price/performance for graphics workstation
- Ultra Wide SCSI-3

EL configuration

\$159⁹⁵ APS CD 36

- Fastest CD-ROM drive ever from APS
- No dropped frames or stuttering audio
- Multimedia marvel

*Does not include DATerm, but does come with block terminator

\$459⁹⁵ APS Q 8000

- Economical file/print server storage
- 5400 rpm Fireball-Stratus with 8GB
- Ultra SCSI-3

EL config.

\$549⁹⁵ APS Q 18000 W

- 7200 rpm Quantum Atlas III with 18GB
- Ultra Wide SCSI-3
- Super server storage

\$1159⁹⁵ APS Q 18000 W

- 7200 rpm Quantum Atlas III with 18GB
- Ultra Wide SCSI-3
- Super server storage

Shown in APS Pro enclosure
The APS EL (Economy Line) drives are intended as replacements or upgrades for your current internal hard disk. They do not include brackets, cables or screws. Premium internal and external configurations are also available. Please keep your invoice for warranty purposes.

APS HYPERDAT®

- 4GB native backup saves the day for home office desktops
- Don't risk your data one more day

APS JAZ II/CD-R 4X12 MASTERING SYSTEM

- Pre-master your discs on Jaz



Corporate Sales (800) 554-3941
International (816) 920-4109
APS Technologies • 6131 Deramus • Kansas City, MO 64120

Order from Our Special Online Catalog @
<http://www.apstech.com/mwsspecial/>
Check order status @ <http://www.apstech.com/status.html>



Call 800-285-0638 Today

Mac OS is a registered trademark of Apple Computer, Inc. APS and APS Technologies are registered trademarks. Other brand of product names are registered trademarks or trademarks of their respective holders.

- 30-day money-back satisfaction on all APS brand drives and accessories. Your risk is the cost of shipping.
- Monitors and 3rd party products carry warranties from their respective manufacturers.
- APS warranty is a pass-through of the manufacturer's warranty which will be serviced by APS for one year. APS warrants APS branded enclosures, brackets and power supplies for a period of one year from the date of purchase and will, at its discretion, replace or repair products found to be defective according to the specific terms of the warranty accompanying the product.
- Reduced orders subject to 20% restocking fee.
- International customers must pay for all shipping charges.
- Listed capacities are formatted.
- Actual data compression and tape capacity vary greatly depending on the type of data recorded, other system parameters and environment.
- Prices and specifications are subject to change without notice.
- You must install system software appropriate to your machine before using our hard drives.
- Not responsible for typographical errors.
- Your APS Drive unit may contain one or more components that were in prior use, but which have been inspected and repaired or rebuilt as necessary. These components, if any are covered by the same warranty provisions, exclusions and limitations to the same extent, and on the same terms as otherwise "new" components.
- © 1998, APS Technologies. All Rights Reserved.

APS
Technologies

Order from Our Special Online Catalog @
<http://www.apstech.com/mwsspecial/>

MEMORY MADNESS

FROM THE LLB COMPANY

Electronic Orders: E-Mail: sales@llb.com •
Web Site: www.llb.com •

- Open 6am to 7pm M-F, 8am to 1pm Sat, PST
 - All major credit cards accepted and charged when order is shipped
 - No surcharge on credit cards
 - Orders received before 8:00p.m. EST weekdays shipped same day
 - PO's are accepted upon approval
 - Returns subject to restocking fee
 - Prices subject to change, not responsible for errors
 - We welcome International orders
- Mail PO's to:
2513 152nd Avenue N.E.,
Redmond, WA 98052

MONITORS



SONY

CPD 100ES 15" \$269
CPD 200GS 17" \$597
GDM 20SE2T 20" \$1260

ViewSonic

VS E655 15" \$225
VS GS771 17" \$389
VS G773 17" \$398
VS G800 20" \$1032

NEC

NEC LCD2000 20" \$6178
NEC M500 15" \$349
NEC E500 15" \$288
NEC M700 17" \$598

newer

Add G3 Power with the
NEW Maxpower & Nupower Series
For the PowerMac G3 Series

Maxpower G3 210MHz/512K Cache \$496

Maxpower G3 240MHz/1MB Cache \$680

NEW For the PowerMac 75/8500 Series Etc.

Maxpower G3 333MHz/1MB Cache \$1242

Maxpower G3 400MHz/1MB Cache \$2093

NEW For the PowerMac 75/8500 Series Etc.

Maxpower G3 333MHz/1MB Cache \$1242

Maxpower G3 366MHz/1MB Cache \$1489

Maxpower G3 333MHz/1MB Cache \$1984

MEDIA

VERBATIM

230MB 3.5" color MO disks-3-pk \$31
1.2GB/512 b/s 5.25" MO disk \$42
1.3GB/1024 b/s 5.25" MO disk \$42
2.3GB/512 b/s 5.25" r/w MO disk \$59
2.6GB/1024 b/s 5.25" r/w MO disk \$59
4mm 60meter/1.3GB DL cartridge \$5.99
4mm 90meter/2GB DL cartridge \$6.50

SONY

CDR 650MB 74min disks - 10-pack \$21
128MB 3.5" optical disks - 3-pack \$25
230MB 3.5" optical disks - 3-pack \$38
600MB/512 b/s 5.25" optical disk \$39
1.2GB/512 b/s 5.25" optical disk \$39
DDS 4mm 2GB Data cartridge \$8
DDS 4mm 4GB Data cartridge \$16

MEMORIZE YOUR MAC

SIMMS \$55 \$14

32MB SIMMS 72-PIN SIMMS	4MB SIMMS 30-PIN SIMMS
32MB \$55	16MB \$54
16MB \$29	4MB \$14
8MB \$20	2MB \$10

DIMMS	\$183	\$59	\$105	\$102
128MB DIMMS POWERMAC G3		32MB DIMMS 168-PIN DIMMS	64MB DIMMS 5V EDO DIMMS	64MB DIMMS 3.3V EDO DIMMS
128MB \$183	128MB \$375	64MB \$105	64MB \$102	
64MB \$89	64MB \$115	32MB \$59	32MB \$59	
32MB \$43	32MB \$59	16MB \$49	16MB \$49	

POWER MACINTOSH

G3 Desktop 266MHz
PowerPC G3
32MB RAM
4GB HD
24X CD-ROM

\$1599



Monitor Sold Separately

POWER MACINTOSH G3

IMAC 233 32/4GB/24X CD-ROM/56k Modem \$1299
G3/300 Desktop 64/6GB/24X CD-ROM \$1999
G3/300 Desktop 32/4GB/24X CD-ROM \$1599
G3/300 Mini-Tower 64/8GB/24X CD-ROM/6MB SGRAM \$2399
G3/333 Mini-Tower 128/9GB/24X CD-ROM/6MB SGRAM \$2986

IMAC MEMORY

AS LOW AS \$177 PER MB

IOMEGA Jaz2 Ext. Drive
+ 1 Free Disk



\$489

Zip Drive w/Disk	\$119
Zip Plus w/Disk	\$199
ZIP 100 disk	\$9
ZIP 100 disks -3-pk	\$27
ZIP 100 disks -10-pk	\$89
Jaz 1GB 3.5" disk	\$89
Jaz 1GB disks - 5-pk	\$418
Jaz 1GB disks - 20-pk	\$1641

PRINTERS & SCANNERS



\$199

Astra 610s	\$148
Astra 1200 32Bit 600dpi	\$249
Trans. Adptr Astra 1200	\$198
Trans. Adptr Astra 1220	\$180

HEWLETT PACKARD
Laserjet 4000 17PPM \$1139
Laserjet 8000 24PPM \$2463

EPSON
Stylus 600 Inkjet \$257

Stylus 700 Photo \$297
Expression 636 Exec. \$805
Expression 636 Pro \$1409
Stylus Color 1520 \$806
Stylus Color 3000 \$1814
Stylus Photo EX \$506

POWERBOOK MEMORY

WALL STREET

128MB	\$231
64MB	\$113
32MB	\$73
16MB	\$51

POWERBOOK G3

128MB	\$235
64MB	\$160
32MB	\$94
16MB	\$70

PB 3400 SERIES

128MB	\$235
96MB	\$190
64MB	\$128
32MB	\$68

PB 2400 SERIES

64MB	\$125
32MB	\$95
24MB	\$80
16MB	\$75

PB 2300 SERIES

48MB	\$152
36MB	\$139
32MB	\$118
20MB	\$112

PB 500 SERIES

32MB	\$92
16MB	\$49
8MB	\$45
4MB	\$40

PB1400 SERIES

48MB	\$139
24MB	\$75
16MB	\$59
8MB	\$49

PB DUO SERIES

36MB	\$212
28MB	\$115
20MB	\$98
14MB	\$85

PB 5300 SERIES

48MB	\$120
32MB	\$93
16MB	\$60
8MB	\$42



The LLB Company, Inc.

1-800-848-8967

www.llb.com International:425.881.1880 Fax:425.881.1930

Choose 220 at www.macworld.com/gehinfo



Modems



TDK CyberExpress
56K PCMCIA Fax/Modem
for Macintosh/Windows
\$149⁹⁹ (TDK U6600013)

U.S. Robotics External V.90 Modem (56K)
(USR EXTMCS6V90) **\$139.99**

Global Village External V.90 Modem (56K)
(GLV EXT9056K) **\$149.99**

Global Village PCMCIA V.90 Modem (56K)
(GLV 56KV90MAC) **\$169.99**

Scanners



Microtek ScanMaker E3+
30-Bit Color Scanner
•300 x 600 dpi •8.5" x 13.5" scan area
\$99⁹⁹ after \$30 mfr. rebate
(MTK SCANE3+MAC) exp. 11/30/98

UMAX Transparency Adapter
(UMAX TPV21218) **\$199.99**

UMAX Astra 1200S Duo Deluxe (30-bit)
(UMAX AST1200DOLX) **\$199.99**
after \$50 mfr. rebate (exp. 12/31/98)

Epson Expression 636 Executive (36-bit)
(EPS 636-EMAC) **\$799.99**

Networking



Asante AsanteTalk
Ethernet-to-LocalTalk Connection
for Apple iMac™
•Allows connection of LocalTalk printers
to Apple® Power Macintosh® iMac
\$99⁹⁹ (ASA 99-00505-81)

NetGear 4-Port 10Base-T Ethernet Hub
(NIG EN104TP) **\$36.99**

Asante 10/100 PCI Fast Ethernet Adapter
(ASA 99-00493-87) **\$49.99**

Mac Software

The Complete National Geographic
updated edition
by Mindscape
•31-CD collection captures 109 years of Nat'l Geographic
\$169⁹⁹ (MDI NATGE0109-C)

Blues Clues- Blues ABC Time Activities
by Humongous **\$16.99**

Britannica 99- Standard Edition
by Broderbund **\$79.99**

Curious George Reads, Writes & Spells
(FREE teacher's) Houghton Mifflin **\$22.99**

CyberStudio Personal Edition
by GoLive **\$79.99**

Higher Score Guaranteed on GMAT™
by Kaplan **\$26.99**

Norton Utilities (4.0)
by Symantec **\$99.99**

Unreal
by GT Interactive **\$39.99**

J&R COMPUTER WORLD

One of America's Largest
Authorized Apple® Dealers

Exclusively from J&R!

Apple® Macintosh® PowerBook® 1400cs

with 166MHz PowerPC™ 603e processor
and 11.3" Dual-Scan Color Display

- 16MB RAM •1.3GB hard drive •128K L2 cache memory
- 12x-speed CD-ROM drive •1.4MB Apple SuperDrive®
- NiMH long-life battery •Type III PCMCIA slot

\$1199⁹⁹ (APP M6274LL/A)....

Lowest Price PowerBook Ever!
(Limited Quantity)

TDK CyberExpress 56K PCMCIA modem (TDK U6600013) **\$149⁹⁹**

PNY 24MB Memory Upgrade from PNY Technologies (PNY PM450724) **\$149⁹⁹**

PNY 48MB Memory Upgrade from PNY Technologies (PNY PM450748) **\$199⁹⁹**

Apple® Macintosh® PowerBook® G3

with 233MHz PowerPC™ G3 processor
and 14.1" TFT Active-Matrix Color Display

- 32MB SDRAM •2GB hard drive •20x CD-ROM drive
- 1.4MB Apple SuperDrive® •66MHz system bus
- Built-in 10BASE-T ethernet •4MB SGRAM video memory

\$1999⁹⁹ (APP M6484LL/A)....

G3 PowerBooks starting at \$1999⁹⁹!

TDK CyberExpress 5600 K56Flex PCMCIA fax/modem (TDK U6600010) **\$149⁹⁹**

PNY (for 32MB, 64MB, or 128MB PNY Memory Upgrades, see below) **PNY**

PNY PNY Technologies Upgrade REBATES!

RAM Memory Upgrades Improve Performance and Speed!
(for G3 PowerBooks & iMac)

32MB (PNY PAPMG3WS32) \$69.99 , after \$10 PNY Rebate	32MB (PNY PAPMG332CS) \$49.99 , after \$10 PNY Rebate
64MB (PNY PAPMG3WS64) \$129.99 , after \$20 PNY Rebate	64MB (PNY PAPMG364CS) \$129.99 , after \$20 PNY Rebate
128MB (PNY PAPMG3WS128) \$269.99 , after \$30 PNY Rebate	128MB (PNY PAPMG3128CS) \$199.99 , after \$30 PNY Rebate

(rebates expire December 31, 1998)

Join the Apple® iMac™ Generation!

Apple® Power Macintosh® iMac™ G3 Computer
•233MHz PowerPC™ G3 processor •32MB SGRAM •4GB hard
drive •24X CD-ROM •Built-in 15" monitor (13.8" VIS) •2MB
VRAM •56Kbps V.90 modem •Cable modem ready
\$1299.99! (APP M6709LL/A)

PowerPC and the PowerPC logo are trademarks of International Business Machines Corporation, used under license herefrom. Apple, the Apple logo, Macintosh, Power Macintosh, PowerBook, Apple are registered trademarks of Apple Computer, Inc. Zip drive is a trademark of Iomega Corporation. ©1998 Apple Computer, Inc. All rights reserved. Apple, the Apple logo, Macintosh, Power Macintosh, and PowerBook are registered trademarks of Apple Computer, Inc. All other trademarks are the property of their respective owners. All Apple products are designed to be accessible to individuals with disabilities. For more information in the U.S. only, call 1-800-764-2333 or TDD 1-800-833-8222.

J&R CORPORATE SALES BUSINESS LEASING:

No Money Down, No Payments for 30 Days!
Call J&R Corporate Sales at
1-800-221-3191 or 1-212-238-9080

Printers



EPSON Stylus® COLOR 600
Ink Jet Printer
•1440-dpi photo-quality color printing
and laser-quality black text •Refurbished
with a 2-year warranty from Epson
\$149⁹⁹ (EPS C20001-SE)

EPSON USB Adapter Cable and Drivers
(dedicated adapter for connection of
Epson Stylus 600 and Apple iMac)
(EPS CUSBPX2) **\$49.99**

Data Storage



Iomega Jaz® 2GB
Portable External SCSI Drive
•Comes with one 2GB cartridge
\$399⁹⁹ (BER JAZEXT2GIG)



SyQuest® syjet™
1.5GB External Hard Drive
•Comes with one 1.5GB cartridge
\$299⁹⁹ (SYQ SYJET15E-38)

Imation USB Drive



Imation® SuperDisk™
USB Drive for the Apple iMac™
•Connects easily with iMac •Reads and
writes 120MB SuperDisk® •Also reads
and writes standard high-density 3.5"
floppy diskettes (both Mac & PC formats)
•Sleek design complements iMac
\$169⁹⁹ (IMT 44002278065)

Imation SuperDisk Diskette 5-Pack
(IMT 4402278420) **\$59.99 per 5-pk.**

Apple Monitors



Apple® ColorSync® Display
17" Monitor (16.1" VIS)
•Sony Trinitron® CRT technology
\$699⁹⁹ (APP M6159LL/A)

Multiple Scan 720 17" Display (16" VIS)
(APP M6151LL/A) **\$499.99**

ColorSync 20" Display (19" VIS)
(APP M6162LL/A) **\$1499.99**

15.1" Flat-Panel Studio Display (15.1" VIS)
(APP M6356LL/A) **\$1299.99**

Order from
www.jandr.com
AOL Keyword: J&R

To Order Toll Free and Receive a Free Catalogue
24 Hours, 7 Days, Anywhere In The USA
800-221-8180
PARK ROW • NEW YORK • NY • 10038 FAX: 1-800-232-4432

Not responsible for typographical or pictorial errors. Merchandise is brand-new, factory-fresh & 100% guaranteed! Some quantities may be limited. Choose 282 at www.macworld.com/getinfo

All Major Credit Cards Accepted
Overnight Delivery Available!
Order Code: MW812
(prices good until 12/31/98)



the
iMac

\$1299

In Stock
Free RAM Installation
w/Purchase



POWERED BY

ATTO

Seagate



BOTTOM LINE

DISTRIBUTION



POWERLOGIX

Quantum

The one source for all your Macintosh needs.

Order from our secure server online at:
<http://www.blol.com/>



1-800-990-5694

Get More RAM!

DIMMs 168-Pin 5.0/5.5 volt

PCI PowerMac, UMAX, PowerPC

16MB 168-Pin DIMM 60ns . \$29

32MB 168-Pin DIMM 60ns . \$49

64MB 168-Pin DIMM 60ns . \$97

PowerLogix 1MB Cache . \$139

1MB VRAM DIMM . \$26

Apple G3 RAM SDRAM

Exclusively for the new G3 Macs

32MB 100MHz SDRAM . \$59

64MB 100MHz SDRAM . \$99

128MB 100MHz SDRAM . \$209

256MB 100MHz SDRAM . \$479

4MB VRAM Upgrade . \$39

SIMMs 72-Pin

16MB SIMM 60ns . \$29

32MB SIMM 60ns . \$49

256K L2 Cache SIMM . \$99.99

1MB L2 Cache 61/71/8100 . \$149

DIMMs 168-Pin 3.3 volt

Starmax, Apple 6500, 4400

32MB 168-Pin DIMM 60ns . \$49

64MB 168-Pin DIMM 60ns . \$97

Cache for 20th/6500/Starmax

512K L2 Cache DIMM . \$79

1MB L2 Cache DIMM . \$179

All RAM sold by BottomLine comes

with a hassle free lifetime warranty!

Media 100qx
Professional
Digital Video
Capture Card
*Component System \$3698

XLR8 G3 Daughter

Card Processor

400Mhz

\$1799

Burn Baby Burn

Yamaha External
CDR Drives
In Yamaha Case

Yamaha CDR 4x/6x Drive . \$379

Yamaha CDR 4x/6x w/Toast \$439

ReRecordable 2x/4x/6x . \$419

ReRecordable 2x/4x/6x Tst . \$479

Adaptec Toast v3.5.5 . \$69.99

CDR Media 74min . From \$1.19

16GB IDE

Internal Drive

\$499.99

UltraStar 92X 9.1GB

Fast/Wide 10,020rpm

\$669

RAILGUN
from Bottom Line
G3
300/1MB
Comes with 1MB backside
cache at a 2/1 ratio (150Mhz)
*IN STOCK!

iomega \$339

iomega Jaz 2GB

External

Removable Drive

ClubMac . \$399

MacMail . \$399

OtherWorld . \$449

Jaz 2GB

Carts

From

\$84.99

64MB

64MB 168-Pin DIMMs

Lifetime Warranty From Bottom Line

Bottom Line's

Low Price

MacMail . \$149.99

MacZone . \$149.99

MacConnection . \$99

ClubMac . \$119

\$97.99

Win A

Free iMac!

The New

iMac From

Apple

Computer

\$1299

Register To Win A Free

iMac

on our web site

<http://www.blol.com/>

iMouse

Superdisk

Keyspan PCI

\$29.99

\$154.99

\$79.99

G3 Processor Card Upgrades

RAILGUN

from Bottom Line

PowerLogix

The "Little Screamer"

PowerForce G3 220/110Mhz 512k \$389

PowerForce G3 300/120Mhz 512k \$499

PowerForce G3 300/150Mhz 1MB \$789

PowerForce G3 300/300Mhz 1MB \$989

New ZIP Socket Upgrades Take Your

Apple G3 Mac To Blistering Speeds!

PowerLogix G3 333Mhz 1MB . \$1089

PowerLogix G3 366Mhz 1MB . \$1289

PowerLogix G3 400Mhz 1MB . \$1589

MAXpower G3 220/110Mhz 512k . \$619

MAXpower G3 250/125Mhz 512k . \$729

MAXpower G3 300/150Mhz 512k . \$749

NUpower G3/250 1MB 1400PB . \$989

DT 233Mhz 32/4GB/24xCD

\$1329

DT 266Mhz

32/4GB/24xCD

\$1499

Need extra RAM/VRAM We Have it!

MicroMat

TechTool Pro v2.1.1

Diagnostic

Software

New Version

Bottom Line's

Low Price

Cyberian . \$89.95

MacZone . \$94.98

MacMail . \$94.99

ClubMac . \$99.99

\$84.95

CDR For All!

Panasonic

CDR Media:

10-Pack \$13.99

25-Pack \$32.25

100-Pack \$119

4x/8x CD-R Recordable Drive Internal

External w/Toast and Cables \$339.99!!

Bottom Line's

Unbeatable

Low Price

\$229

USB Devices:

Agfa 1212U Scanner USB . \$179.99

Macally iMouse . \$29.99

Macally iHub 4-Port USB . \$49.99

Macally iBall USB Trackball . \$49.99

Farallon iPrint LocalTalk . \$109.99

Ethernet Crossover Cable . \$10.99

Connectix Color QuickCan . \$119

Epson 1220U USB Scanner . \$179

Epson Color 640 USB Printer . \$199

Epson 740 USB Printer . \$279

Parallel To USB Cable . \$47.99

Keyspan PCI USB Card . \$79.99

uConnect USB To Serial . \$65.99

Agfa 1212U Scanner USB . \$179.99

Macally iMouse . \$29.99

Macally iHub 4-Port USB . \$49.99

Macally iBall USB Trackball . \$49.99

Farallon iPrint LocalTalk . \$109.99

Ethernet Crossover Cable . \$10.99

Connectix Color QuickCan . \$119

Epson 1220U USB Scanner . \$179

Epson Color 640 USB Printer . \$199

Epson 740 USB Printer . \$279

Parallel To USB Cable . \$47.99

Keyspan PCI USB Card . \$79.99

uConnect USB To Serial . \$65.99

Agfa 1212U Scanner USB . \$179.99

Macally iMouse . \$29.99

Macally iHub 4-Port USB . \$49.99

Macally iBall USB Trackball . \$49.99

Farallon iPrint LocalTalk . \$109.99

Ethernet Crossover Cable . \$10.99

Connectix Color QuickCan . \$119

Epson 1220U USB Scanner . \$179

Epson Color 640 USB Printer . \$199

Epson 740 USB Printer . \$279

Parallel To USB Cable . \$47.99

Keyspan PCI USB Card . \$79.99

uConnect USB To Serial . \$65.99

Agfa 1212U Scanner USB . \$179.99

Macally iMouse . \$29.99

Macally iHub 4-Port USB . \$49.99

Macally iBall USB Trackball . \$49.99

Farallon iPrint LocalTalk . \$109.99

Ethernet Crossover Cable . \$10.99

Connectix Color QuickCan . \$119

Wacom 6x8

Intuos Tablet

Bottom Line's

Low Price

MacZone . \$319

Cyberian . \$329

MacMail . \$329

ClubMac . \$309

\$299

Quantum

Atlas III

UltraWide LVD

Bottom Line's

Low Price

MacWarehouse . \$699

Cyberian . \$659

ClubMac . \$639

CDW . \$657

\$539

Yamaha

2x/4x/6x

CDRW

Rerecordable

Drive*

Bottom Line's

Unbeatable

Low Price

\$309

CDRW Media From \$11.99!

128MB

128MB SDRAM DIMMs

For G3 Apple PowerMac Systems

Lifetime Warranty From Bottom Line

Cyberian . \$282

MacZone . \$366

MacConnection . \$259

ClubMac . \$259

\$209

Bottom Line's

Low Price

\$209

Bottom Line's

Low Price

\$209

Bottom Line's

Low Price

\$209

Bottom Line's

Low Price

\$209

Bottom Line's

Low Price

\$209

Bottom Line's

Low Price

\$209

Bottom Line's

Low Price

\$209

Bottom Line's

Low Price

\$209

Bottom Line's

Low Price

\$209

Bottom Line's

Low Price

\$209

Bottom Line's

Low Price

\$209

\$209

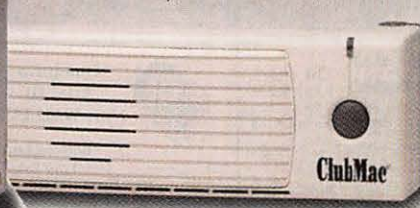
ClubMac® KILLER DRIVES!

Quantum

STRATUS ST 10MS Seek
5400 RPM
Bare
3.2GB



ONLY \$185



Weekly Specials

MEDALIST PRO
Seagate
4.5GB
7200 RPM
Bare
\$289

ATLAS III
Quantum
18.2GB
7200 RPM
Bare
\$1189

BARRACUDA 9LP
Seagate
9.1GB
7200 RPM
Bare
\$569

FIREBALL EL
Quantum
5.1GB
IDE
Bare
\$159

HARD DRIVES

Quantum Stratus drives carry a 3 Year Warranty
Quantum Atlas & Viking drives carry a 5 Year Warranty

Description	Model	Access	RPM	Bare	Ext
Ultra SCSI-3					
2.1GB Stratus SE	QM32160SES	10ms	5400	'209	'279
3.2GB Stratus ST	QM33240STS	10ms	5400	'185	'255
3.2GB Stratus SE	QM33240SES	10ms	5400	'239	'309
4.3GB Stratus SE	QM34320SES	10ms	5400	'279	'349
6.4GB Stratus SE	QM36480SES	10ms	5400	'359	'429
8.4GB Stratus SE	QM38420SES	10ms	5400	'479	'549
9.1GB Atlas III	QM309100TDS	7.8ms	7200	'639	'709
18.2GB Atlas III	QM318200TDS	7.8ms	7200	'1159	'1229
UltraWide SCSI-3					
4.5GB Viking II	QM304550PXS	7.5ms	7200	'329	'419
9.1GB Viking II	QM309100PXS	7.5ms	7200	'559	'649
9.1GB Atlas III	QM309100TDLW	7.8ms	7200	'639	'729
18.2GB Atlas III	QM318200TDLW	7.8ms	7200	'1159	'1249

*80 pin SCSI drive with 68 pin adapter

IDE Drives

Description	Model	Access	RPM	Bare	Ext
2.5GB Fireball EL	QM302500ELA	10ms	5400	'129	---
5.1GB Fireball EL	QM305100ELA	10ms	5400	'159	---
7.6GB Fireball EL	QM307500ELA	10ms	5400	'219	---
10.2GB Fireball EL	QM310200ELA	10ms	5400	'289	---

Seagate

Description	Model	Access	RPM	Bare	Ext
Ultra SCSI-3					
4.5GB Medalist Pro	ST34520N	9.5ms	7200	'289	'359
6.5GB Medalist Pro	ST36530N	9.5ms	7200	'389	'459
4.5GB Medalist Pro	ST39140N	9.5ms	7200	'499	'569
9.1GB Barracuda 9LP	ST39173N	7.1ms	7200	'569	'639
18.2GB Barracuda 18	ST118273N	7.1ms	7200	'1149	'1219
UltraWide SCSI-3					
9.1GB Barracuda 9LP	ST39173W	7.1ms	7200	'569	'659
9.1GB Cheetah 9LP	ST39102LW	12.2ms	10000	'789	'879
18.2GB Barracuda 18	ST118273W	7.1ms	7200	'1149	'1239
18.2GB Cheetah 18	ST118202LW	12.2ms	10000	'1429	'1519

Barracuda & Cheetah drives carry a 5 Year Warranty
Medalist drives carry a 3 Year Warranty

IBM

Description	Model	Access	RPM	Bare	Ext
UltraWide SCSI-3					
9.1GB UltraStar 9ES	00K3990	7.5ms	7200	'579	'669
9.1GB UltraStar 9ZX	59H6590	6.5ms	1000	'639	'729
18.2GB UltraStar 18XP	59H6591	6.5ms	7200	'1199	'1289

IBM drives carry a 5 Year Warranty

THE CLUBMAC PACKAGE
ClubMac drives are preformatted and thoroughly tested. ClubMac external drives include a 30-day Money Back Guarantee, Charisma Anubis Formatting Utility software, user's guide, 25/50-pin SCSI cable and power cord (wide drives include 68/68 pin SCSI cable). Bare drives include mounting screws only.

INTERNAL HARD DRIVE KITS

Need a bracket and formatting software for your hard drive? ClubMac Internal Hard Drive Kit's include Charisma's Anubis Hard Drive Utility (with Power Control), a bracket and screws- ask your customer service representative which one you need.

TAPE BACK-UP

ClubMac DDS-3 DAT Drive
12-24GB
\$999

CLUBMAC TAPE BACK-UP
4-8GB DDS-2 DAT Drive w/ Retrospect 4.1\$729
12-24GB DDS-3 DAT Drive w/ Retrospect 4.1\$999
20-40GB DLT Drive w/ Retrospect 4.1\$2699
35-70GB DLT Drive w/ Retrospect 4.1\$5999

ClubMac 8mm AIT Drive
Up to 25-50GB
6MB/Sec!
ONLY \$2399

CLUBMAC AIT DRIVE
25-50GB 8mm AIT Drive\$2399
25-50GB 8mm AIT w/ Fast & Wide Card\$2629

BONUS OFFER!!!
All ClubMac Tape Back-up Products are bundled with Retrospect 4.1

RETROSPECT 4.1
Retrospect 4.1 Retail Single User\$149
Retrospect 4.1 Remote 10 User License\$175
Retrospect Network Kit 4.1 (w/10 User license)\$275

REMOVABLE

\$299
syJet 1.5 GB

REMOVABLE DRIVES
ClubMac SyQuest 200MB 5.25"\$349
SyQuest EZ Flyer 230MB 3.5"\$149
SyQuest SyJet 1.5GB 3.5"\$299

SYQUEST MEDIA

Media	Qty 1	Qty 10	Qty 20
44MB	'38ea	'37"ea	'37ea
88MB	'38ea	'37"ea	'37ea
200MB	'59ea	'58ea	'57ea
270MB	'43ea	'42ea	'41ea
EZ230MB	'27ea	'26"ea	'26ea
1.5GB SyJet	'79ea	CALL	CALL

CD READERS & RECORDABLES

BLAZING FAST! CD-ROM
36X
ONLY \$159
5400KB/sec data transfer
60ms avg access time
Caddy-less design
CLUBMAC CD-ROM READERS
36X 60ms 5400K/sec\$159
16X 5 Disc CD Changer\$279

ClubMac \$349!!
4X/8X
Toast 3.5
Direct CD
Easy CD Creator
Mac or PC Compatible

CLUBMAC CD-RECORDERS
4X/8X CD-R w/Software\$349
4X/12X CD-R w/Software\$399
CLUBMAC CD-REWRITABLE
4X/2X/6X CDRW w/Software\$459

THE CLUBMAC PACKAGE: ClubMac CD-ROM & CD Recorders are thoroughly tested. CD-ROM & CD Recorders include a 30-day Money Back Guarantee, Charisma CD AutoCache utility software, user's guide, 25/50-pin SCSI cable, terminator, and power cord.

Zip Drive Solutions

ZIP REFURB
100MB
\$89.95
Includes Tools on CD
IOmega ZIP DRIVES
Zip Drive w/Tools on CD\$119
ZipPlus Drive w/one cartridge\$179
Zip Bundle-drive, 11 Disks, Case, 2 Caddy's\$259
Zip Drive Internal -all PowerMacs\$119
Zip Drive Internal -all PowerComp/Amx\$99

Jaz Drive Solutions

2.0GB
NEW LOW PRICE
ONLY \$349.95
IOmega JAZ DRIVES
Jaz 1GB Drive w/one cartridge\$299
Jaz 2GB Drive w/Tools on CD\$349
ClubMac Jaz 1GB Drive w/1 cartridge\$299
ClubMac Jaz 2GB Drive w/Tools on CD\$379
Jaz 1GB Drive Internal -all PowerMacs\$279
Jaz 2GB Drive Internal -all PowerMacs\$359

IOmega MEDIA

ZIP Media
as low as **\$9.95**

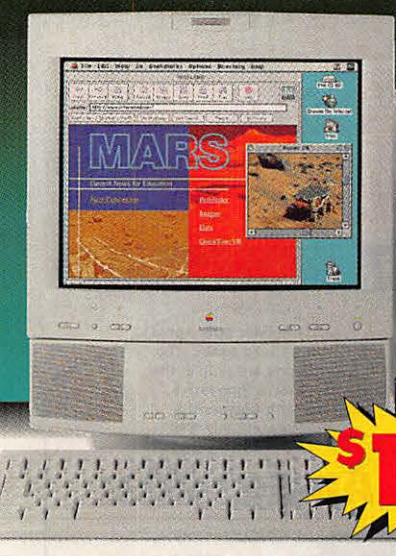
JAZ Media
as low as **\$84.95**
For JAZ media

Format	Part#	Qty 1-2	Qty 3-6	Qty 7-9	Qty 10+
ZIP 100MB	1040 1006	\$19.95	\$15.95	\$13.95	\$9.95
Format	Part#	Size	Qty 1-2	Qty 3-5	Qty 6+
JAZ 1GB	1040 1015	1.0 GB	\$99.95	\$89.95	\$84.95
JAZ 2GB	1040 1074	2.0 GB	\$124.95	\$99.95	CALL

CALL 1-800-260-8549 FOR A FREE CATALOG

WARRANTIES: All items manufactured by ClubMac are returned to ClubMac for warranty repair. All other items carry manufacturer's warranty. **MONEY BACK GUARANTEE:** All products manufactured by ClubMac carry a 30 day money back guarantee. ClubMac extends all other manufacturers' return policies to its customers. Non-ClubMac products carry 30 day money back guarantee when specified. **RETURNS:** Call for RMA number. Any product that is returned WITHOUT an RMA number will be refused. **ALL PRODUCT INFORMATION AND PRICES ARE SUBJECT TO CHANGE WITHOUT NOTICE. NOT RESPONSIBLE FOR TYPOGRAPHICAL ERRORS.**

UNBELIEVABLE PRICES ON POWERMACS



Power Mac G3

UP TO
333
MEGAHERTZ

Starting At
\$1599



FREE
COREL
DRAW 8
with any Apple CPU Purchase
A \$459⁹⁵
Value
Ask for Item# PPP 1022

Offer good while supplies last. Apple CPU must be purchased at advertised price. Offer good with instant rebate promotion.

INSTANT REBATES!!

SAVE \$85*
on any product priced between \$1599 and \$1999.

SAVE \$100*
on any product priced between \$2000 and \$2499.

SAVE \$150*
on any product priced between \$2499 and \$2999.

SAVE \$200*
on any product priced between \$2999 and \$3499.

SAVE \$225*
on any product priced between \$3499 and \$4999.

SAVE \$300*
on any product priced between \$4999 and above.

*Instant Rebates are valid only on products advertised in this offer. Instant Rebates are not valid with any other offer or promotion. Offer expires 10/31/98.

G3 266MHz Desktop 32MB RAM, 4GB HD, 24X CD, 10BT, 2MB SGRAM	\$1599
G3 266MHz Desktop 32MB RAM, 4GB HD, 24X CD, 10BT, 2MB SGRAM, 56K, DVD	\$1749
G3 300MHz Desktop 64MB, 6GB HD, 24X CD, 10BT, 2MB SGRAM, Zip	\$1999
G3 300MHz Minitower 64MB, 8GB HD, 24X, 10BT, 6MB SGRAM, Zip, AV	\$2399
G3 333MHz Minitower 128MB, 9GB U/W SCSI, 24X, 10BT, 6MB SGRAM	\$2999

DVD VIDEO

Available for \$1749

Powerbook G3



SPECIAL BUY!





- 233 MHz
- 56K V.90 PCMCIA
- 1.44 Floppy
- 20x CD-ROM
- 32 MB RAM
- 2GB IDE

\$2139
- \$100 Instant Rebate
\$2039*

G3 233MHz w/12.1" DS 32MB RAM, 2GB IDE HD, 20X CD, 10BT	\$1999-\$85=\$1914
G3 233MHz w/12.1" DS 32MB, 2GB IDE, 20X, 10BT, 56K V.90, 1.44MB	\$2139-\$100=\$2039
G3 233MHz w/12.1" TFT 32MB, 2GB IDE, 20X, 10BT, 56K	\$2299
G3 233MHz w/14.1" TFT 32MB, 2GB IDE, 20X, 10BT, S-Video, 1.44MB	\$2699-\$150=\$2549
G3 233MHz w/14.1" TFT 32MB, 2GB IDE, 20X, 56K, 10BT, S-Video	\$2799
G3 266MHz w/14.1" TFT 64MB, 4GB IDE, 20X, 56K, 10BT, S-Video	\$3499
G3 300MHz w/14.1" TFT 64MB, 8GB IDE, DVD, 56K, 10BT, S-Video	\$4999

*After Instant Rebate

MONITORS	GRAPHIC CARDS	PRINTERS	SOFTWARE	SCANNERS
ONY Multiscan 100ES 15", 1280x1024, 25mm.....\$229 ⁹⁵ Multiscan 100GS 15", 1280x1024, on screen disc.....\$279 ⁹⁵ Multiscan 200ES 17", 1280x1024, 25mm.....\$399 ⁹⁵ Multiscan 220GS 15", 1280x1024.....\$499 ⁹⁵ Multiscan 420GS 20", 1600x1200.....\$799 ⁹⁵ Multiscan 400PS 19", 1600x1200.....\$659 ⁹⁵ Multiscan 520GS 21", 1600x1200.....\$1199 ⁹⁵ Multiscan 500PS 21", 1600x1200.....\$1229 ⁹⁵ PPLE Multiple Scan 15AV 15", 1024x768.....\$349 Apple ColorSync 17".....\$699 Apple ColorSync 20".....\$1499 ITACHI CB215 17", 15.9 viewable 1024X768.....\$399 CT7515 19", 1600x1200.....\$699 SuperScan MC801HR 21", 1600x1280.....\$1399 IEWSONIC A 771 17", 11280x1024, 25 dot pitch.....\$409 1775, 17" 1280x1024, 80Hz, 25 dot pitch.....\$559 790, 19" 1600x1200, 25 dot pitch.....\$599 T 813, 21" 1600x1200, 85Hz, 28 dot pitch.....\$1189 815, 21" 1800x1440, 76Hz, 25 dot pitch.....\$1279	ATI Nexus GA™ 16MB 2D & 3D Pro PCI.....\$19.00 XClaim VR™ 4MB w/TV free tuner card.....\$244.95 XClaim TV™ Tuner.....\$82.00 PARTECH iRez Video Capture PowerBook PCMCIA.....\$149 IMICRO Mac Rocket 2D/3D w/Video Out.....\$209 Pro Rez 2D/3D 128 bit 6MB PCI.....\$299 Twin Turbo 128M 4MB PCI.....\$269 Twin Turbo 128M 8MB PCI.....\$399 Ultimate Rez 2D/3D 8MB PCI (Promo).....\$199 Turbo TV Price after \$20 Mail in Rebate.....\$79 MODEMS GLOBAL VILLAGE MODEMS Teleport V90 56K Fax/Modem.....\$138.95 U.S. ROBOTICS MODEMS 56K V90 FAX/Modem.....\$138.95 LINKMATES 56K V90 PCMCIA FAX/Modem.....\$99.00	EPSON Stylus Color 850 1440 DPI.....\$349 Stylus Color 800 1440 DPI.....\$249 Stylus Color Photo 700 6 COLOR.....\$249 Stylus Color 3000 17x 22" 1440 DPI.....\$1299 HEWLETT PACKARD HP LaserJet 6MP.....\$878 HP LaserJet 4000N.....\$1495 ACCELERATORS MACTELL G3 250MHz/125x512K Cache SPECIAL!!!.....\$399 NEWER TECHNOLOGY MAXPower G3 220MHz/110 Cache.....\$449 MAXPower G3 6100 240MHz/160 Cache.....\$699 MAXPower G3 7100/1100 210MHz/105 Cache.....\$599 MAXPower G3 7100/1100 240MHz/125 Cache.....\$799 MAXPower G3 250125 PPS 750 upgrade.....\$549 SONNET Crescendo G3 215-255MHz/512K 8100/7100 8100.....\$499 Crescendo G3 240-550MHz/1MB 6100/7100 8100.....\$599 Crescendo G3 267-366MHz/1MB 6100/7100 8100.....\$699 Crescendo G3 233MHz/512K Cache/PCI.....\$399 Crescendo G3 266MHz/1MB Cache/PCI.....\$599 Crescendo G3 300MHz/1MB Cache/PCI.....\$799	ADOBE Photoshop 5.0 Upgrade.....\$179.95 Illustrator 8.0 Upgrade.....\$119.95 CONNECTIX Virtual PC 2.1 w/Win98.....\$138.95 DR. SOLOMON'S Virex 5.8.....\$59.95 MICROSOFT Office 98 upgrade.....\$263.95 QUARK QuarkXPress 4.0.....\$698.95 *After \$30 Mail-in Rebate for existing PC owners. Expires 12/31/98.	AGFA Agfa SnapScan 310 30 bit Scanner.....\$199 Agfa Arcan II Desktop Pro Scanner.....\$1399 UMAX UMAX Astra 610S.....\$99* UMAX Powerlock II w/trans. adapter.....\$895* MICROTEK Microtek Scanmaker 4, Dual Platform, 36 bit.....\$699 Microtek Scanmaker V600, 30bit.....\$109* Microtek Scanmaker V310, 30bit.....\$49* *After \$20 Mail-in Rebate while supplies last. *After \$30 Mail-in Rebate while supplies last. *After \$200 Mail-in Rebate while supplies last.



NO SURCHARGE

Club Mac®

SOURCE CODE 69128

ORDER TODAY!

24 HOURS A DAY

ClubMac SOURCE CODE **69128**

ORDER TODAY! 24 HOURS A DAY 7 DAYS A WEEK

1-800-260-8549

Order On-line @ <http://www.clubmac.com>

Sales & Customer Service
24 Hours a Day, 7 Days a Week.....(800) 260-8549

Inquiries & International Sales
M - F 9am - 9pm PST.....(949) 768-8130

24-Hour Fax.....(949) 768-9354

Corporate/Educational Sales
M - F 9am - 5pm PST.....(800) 258-2621

Technical Support
M - F 9am - 9pm PST.....(800) 854-6227

E-Mail: ClubMac Sales.....csmals@clubmac.com
Customer Service.....custsvc@clubmac.com
Technical Support.....techsup@clubmac.com
Mail: ClubMac.....7 Hammond, Irvine, CA 92618



Computing Solutions Built for Business™

CDW®, a one-stop resource for everything you need.

Apple® Macintosh® PowerBook® G3

- 233MHz PowerPC™ G3 processor
- 512K Level 2 backside cache
- 32MB EDO DRAM
- 2GB hard drive
- 20X Max CD-ROM drive
- 14.1" active-matrix display
- Built-in 10BASE-T port
- 56K bps (K56flex) modem

\$2799.00 CDW 129396

NEW!

Apple® Power Macintosh® G3

- 300MHz PowerPC™ G3 processor
- 1MB backside Level 2 cache
- 64MB RAM
- 6GB hard drive
- 24X CD-ROM drive
- Integrated Iomega Zip drive

\$1999.00 CDW 124952

Apple® Power Macintosh® G3/266 desktop

- 32MB RAM
- 4GB hard drive
- 24X CD-ROM

\$1599.00 CDW 124948

COMPUTERS

Apple® iMac Series	
233MHz PowerPC G3 32MB 4GB 24X	1299.00
Apple® Power Macintosh® Series	
266 MHz PowerPC G3	
32MB 4GB 24X desktop	1599.00
300 MHz PowerPC G3	
64MB 6GB 24X desktop	1999.00
300MHz PowerPC G3 64MB 8GB	
24X Iomega Zip drive minitower	2399.00
333MHz PowerPC G3 128MB	
24X 24X mini-tower	2999.00
Apple® Power Macintosh® Server G3 Series	
300MHz PowerPC G3 64MB	
4GB 24X CD 10/100 ENET	2999.00
333MHz PowerPC G3 128MB	
24X 24X mini-tower	4599.00
Apple® Macintosh® PowerBook® Series	
233MHz PowerPC G3 32MB	
2GB 12.1" DS 20X	1917.56
233MHz PowerPC G3	
32MB 2GB 12.1" DS 20X	2127.36
233MHz PowerPC G3	
32MB 2GB 14.1" AM 20X	2799.00
266MHz Power PC G3	
64MB 4GB 14.1" AM 20X	3499.00
300MHz Power PC G3	
64MB 8GB 14.1" AM DVD	4999.00
AM = active-matrix display DS = dual-scan display	

MONITORS

ColorSync 17 17" (16.1" view) 0.26mm	699.00
ColorSync 20 20" (19" view) 0.26mm	1499.00
MultipleScan 720 17" (16" view) 0.28mm	499.00
AppleVision 850 20" (19" view) 0.26mm	1609.74
MITSUBISHI DISPLAY PRODUCTS	
PowerLite Pro Display	
87TXM 17" (16" view) 0.25mm AG	529.98
91TXM 21" (19.7" view) 0.28mm AG	1059.84
PHILIPS MAGNAX	
MV5011 15" (14" view) 0.28mm	159.89
107S 17" (16.2" view) 0.28mm	279.26
109S 19" (17.9" view) 0.26mm	629.51

NEC

A500 15" (13.8" view) 0.28mm	228.99
E500 15" (13.8" view) 0.25mm	276.76
A700 17" (15.6" view) 0.28mm	409.85
E700 17" (15.6" view) 0.25mm	528.98
P750 17" (15.6" view) 0.25mm	568.14
E900 19" (18" view) 0.28mm	595.04
MultiSync P1250+ 21" (19.6" view) 0.28mm	1179.63

SONY

100ES 15" (14" view) 0.25mm	267.42
200ES 17" (16" view) 0.25mm	439.89
400PS 19" (18" view) 0.27mm	639.00
500PS 21" (19.8" view) 0.26mm	1339.99

ViewSonic®

GS771 17" (16" view) 0.27mm	368.50
G790 19" (18" view) 0.26mm	619.98
G800 20" (18.4" view) 0.28mm	949.23
G810 21" (20" view) 0.25mm	947.28
P775 17" (16" view) 0.25mm	508.10
PS790 19" (18" view) 0.25mm	707.69
PT813 21" (20" view) 0.28mm AG	1109.64
P815 21" (20" view) 0.25mm	1218.17

VIDEO BOARDS

Nexus GA 8MB PCI	499.57
Xclaim TV external TV tuner	84.87
Xclaim VR 4MB PCI	249.98
Xclaim 3D RAGE PRO 4MB PCI	177.36
Xclaim 3D RAGE PRO 8MB PCI	234.03

Ultimate Rez 2D/3D 8MB PCI	478.00
i3D Pro Rez 8MB PCI Power Mac	289.12
Twin Turbo 8MB PCI Power Mac	419.66
Turbo TV video capture PCI	98.60

COMMUNICATIONS

Megahertz 33.6 Ethernet 10BT	
PC Card w/RJ11	299.71
Courier I-modem	346.82

TelePort 56K V.90 external	134.03
56K bps fax/modem PC Card	179.09
56K bps fax/modem Ethernet PC Card	218.66

3Com U.S. Robotics	
Sportster 33.6 external	106.71
Sportster 56K Faxmodem external	147.99

DATA STORAGE

Iomega	
Zip drive 100MB external	119.95
Zip drive 100MB internal	119.95
ZipPlus drive 100MB external	169.95
100MB Zip disk 3-pack	49.95
Jaz drive 1GB external	299.95
Jaz drive 2GB internal	399.95
Jaz drive 2GB external	399.95
1GB Jaz disk 3-pack	269.95

LACIE

32X CD external	169.00
4X8 CD-Recordable external	199.00
4X24 External CD-Rewriter drive	669.00
2.1GB Quantum Ultra SCSI-3 internal	209.00
3.2GB Quantum ST Ultra SCSI-3 int.	229.00
6.4GB Quantum ST Ultra SCSI-3 internal	419.00
9.1GB Quantum Ultra SCSI-3 internal	529.00
9.1GB Apple drive Ultra SCSI-3 external	379.00
4GB Apple drive Ultra SCSI-3 external	419.00
Quantum	
3.2GB Fireball SE Ultra SCSI-3	267.80
4.3GB Fireball SE Ultra SCSI-3	305.27
6.4GB Fireball SE Ultra SCSI-3	395.85
8.4GB Fireball SE Ultra SCSI-3	509.07

IMATION	
USB 120MB SuperDisk drive for iMac	149.99

SCANNERS

AGFA	
SnapScan 1236S scanner	237.56
SnapScan 310 flatbed scanner	199.02
SnapScan 600 Art Line flatbed scanner	444.52

EPSON	
Expression 636 Executive 2 scanner	599.00
Expression 636 Artist scanner	799.00
Expression 636 Professional scanner	1199.00
Expression 836XL scanner	2499.00

MICROTEK	
ScanMaker E3 Plus scanner	127.48
ScanMaker 9600XL scanner	1425.40
ScanMaker X6 scanner	179.71

Polaroid	
SprintScan 35LE film scanner	684.72
SprintScan 35+ film scanner	1508.22



"...the iMac puts Apple out ahead again. The reasons are simple: the iMac is innovative, elegant, inexpensive..."
Macworld, July 1998

Apple® iMac

233MHz PowerPC™ G3 processor	512K backside Level 2 cache	32MB SDRAM standard, expandable to 128MB
4GB IDE hard drive	24X CD-ROM drive	56K bps (K56flex and V.90) modem
10/100BASE-T Ethernet	Mac OS 8.1	15" (13.8" viewable) high-quality display

\$1299.00 CDW 116562

Upgrades and accessories for Apple® iMac

Use **Imation's SuperDisk** drive with your iMac and you'll get a high-capacity storage device and a floppy drive too!

- 120MB capacity
- USB interface
- Transfer rate up to 12Kbps

\$149.99 CDW 123628

Simple Technology 32MB RAM upgrade	\$79.73	CDW 126225
Simple Technology 64MB RAM upgrade	\$138.00	CDW 126226
Umax Astra 1220U USB scanner	\$149.00	CDW 129492
AsanteTALK Ethernet connection	\$97.27	CDW 124358
Epson Stylus 740 USB inkjet printer	\$279.00	CDW 125117

UMAX	
Astra 610S flatbed scanner	99.00
Astra 1200S flatbed scanner w/Adobe PhotoDeluxe	249.00
PowerLook II Duo Advance flatbed scanner	1295.00
Mirage i15e flatbed scanner w/MagicScan software	2995.00

DIGITAL IMAGING

AGFA	
ePhoto 307 digital camera	244.51
ePhoto 1280 digital camera	599.00
Nikon	
Coolpix 300 digital camera	415.16
Coolpix 600 digital camera	564.62
Coolpix 900 digital camera	789.95

PRINTERS

EPSON	
Stylus Color 800	249.00
Stylus Color 850	349.00
Stylus Color 1520	499.00
Stylus Color 3000	1999.00
Stylus Photo 700	249.00
Stylus Photo EX	499.00

HP	
HP DeskJet 340 portable ink jet printer	269.88
HP DeskJet 1120Cse printer	499.00
HP DeskJet 1600CM printer	1544.25
HP LaserJet 6MP printer	877.26
HP LaserJet 4000N printer	1439.55
HP LaserJet 8000DN printer	3188.35

CDW® DIRECTORY	
PC sales	800-800-4239
Mac sales	800-509-4239
Corporate sales	800-280-4239
Corporate software sales	800-294-4239
Government and Education sales	800-808-4239
Networking sales	800-377-4239

CDW® TELEPHONE HOURS

Sales	
Monday-Friday 7 a.m.-9 p.m. CT	
Saturday 9 a.m.-5 p.m. CT	
Tech Support/Returns for Customers	
800-383-4239	
Monday-Friday 7 a.m.-9 p.m. CT	

BUY WITH CONFIDENCE CDW® IS A **NASDAQ** TRADED COMPANY
TICKER SYMBOL CDWC D & B rated S&P

Credit card charges are not submitted until time of shipment. For your protection, we ship only to your credit card's verified billing address. Shipping and handling charges apply; please ask your CDW account manager for details. Before returning any product, you must obtain an RMA number. Non-defective returns are subject to a restocking fee. Software, chips and other electronic components are not returnable. Allow 10 business days for shipping when paying by personal check. All pricing subject to change. For all prices, products and offers, CDW reserves the right to make adjustments due to changing market conditions, product discontinuation, manufacturer price changes, errors in advertisements or other extenuating circumstances. All trademarks and registered trademarks are the sole property of their respective owners.

800-509-4239

www.cdw.com

©1998 CDW® Computer Centers, Inc. 200 N. Milwaukee Avenue, Vernon Hills, IL 60061 MW4107 12/98
56K modems are capable of 56K bps downloads, however, current regulations limit download speed to 53K bps.

Choose 2 at www.macworld.com/getinfo

Macworld®

YOU SAVE!

60% OFF
12 issues
\$9.97

☐ **74% OFF**
Two years/24 issues
\$49.97

(please print)

5SRD4

State

Zip

ent enclosed.

☐ Bill me later.

U.S. orders add US\$20 postage; Canadian GST included.
in payment.



FREE CD-ROM!

Bonus Gift: Our exclusive Clip Art Sampler CD containing an extensive collection of clip art images, digital stock photos and fonts! Send for your Clip Art CD now – **FREE** with your paid order!

Take us out on the Web —
<http://www.macworld.com>



NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

BUSINESS REPLY MAIL

FIRST-CLASS MAIL PERMIT NO. 66 BOULDER, CO

POSTAGE WILL BE PAID BY ADDRESSEE

Macworld[®]

Subscription Department
PO Box 54506
Boulder CO 80323-4506



Introducing a NEW Service to Macworld Readers...



www.macworld.com/getinfo

Macworld's **NEW** **ONLINE** Reader Service

Introducing Get Info. Now you can get information on all the products and services you see in *Macworld*. Only get it faster. Simpler. Better. Now. All you have to do is visit one Web site:

www.macworld.com/getinfo

Then select the products, product categories or advertisers for whom you want to receive information.

That's it. You can have the information delivered to you by e-mail, postal mail or even telephone. Or you can click on a link that will take you straight to the vendor's Web site in one easy step.

It's quick. Convenient. Fast. So next time you're interested in a product, don't get a stamp. Get Info.

Macworld

PRODUCT INDEX

Category	Page No.	Category	Page No.
Business Operations158-159		Graphics149	
Bar Code		Clip Art	
Inventory Management			
Print Utility		Memory & Upgrades177-180	
Software		Memory Upgrade	
Education/		Services180-182	
Entertainment160		Printing	
Discount Software		Data Recovery	
Communications/		Digital Production	
Networking161-162		Repair	
Cross Platform			
Modems			
Peripheral Products162-163			
Digital Media		Shopper Account Manager:	
Magnetic Media		Carol Johnstone.....415-243-3691	
Cd Rom		carol_johnstone@macworld.com	
System & Peripherals . . .164-177			
		Shopper Account Manager:	
Digital Advertising Coordinator:		Niki Stranz.....415-243-3664	
Mac Scott.....415.243.3510		niki_stranz@macworld.com	
mac_scott@macworld.com			

MBC The new version of MacBARCODA

Over 170 bar code variations! A totally new MacBARCODA package including over 30 variations of Code 128, UPC, PostNET, ITF, Codabar, Code 39, book and magazine codes, coupon codes, SSC codes and much, much more!
• Apple Scriptable! • Color control! • Most accurate bar code creator available! • Unlimited free telephone support
• PowerMac and OS8 compatible and 68000/System 7.x

Also PostScript & Thermal Label Printing Solutions

Computalabel
INTERNATIONAL

28 Green Street, Newbury, MA 01951
Tel:800-289-0993 Fax:978-462-9198
www.zoo.co.uk/~computalabel

"A Macworld never goes by without me checking to compare prices. I always look to see if what I need is there."

—Owner,
Computer Consultants

*Source: Heavy Communication Measurement report, January 1995

Macworld
SHOPPER

Bar Code Headquarters



- 30 Day \$ Back Guarantee
- Free Shipping in USA
- Toll Free Tech Support

WORTHINGTON
DATA SOLUTIONS

- Portable Batch Readers
- Cordless Interactive RF Bar Code Readers
- ADB Bar Code Readers
- Wand, Laser, CCD, Magstripe or Slot Badge
- PostScript Bar Code Fonts

1-800-345-4220
Or Call 831-458-9938
Website: www.barcodehq.com



Create your own bar code graphics.



CALL FOR FREE DEMO

Bar Code Pro[®] v3.5 with Veribar[®]

For guaranteed readability!



Create perfect PostScript (EPS) bar code graphics for Quark, PageMaker, Illustrator, Freehand, etc. All popular bar code types (UPC, Postnet, 39, EAN, 128, ITF, ISBN) included. Works with any printer resolution, with no fonts required! Mac/Win95/NT



www.snx.com

Call 800 619-0299

Tel 718 499-6293 Fax 718 768-3997

http://www.scientific.com

Professional Software Developers

Looking for career opportunities?

Check out our website!

Nationwide Service

Employment Assistance

Resume Help

Marketability Assessment

Never a fee

Scientific Placement, Inc.

800-231-5920 • 800-757-9003 (Fax)

das@scientific.com

PrintChef[®] — "it's not printing magic, it's printing science..."

When it comes to printing:

printChef[®] =

...there is no equal!

print different[™]

Add the **printChef** button
to your print dialog today...

Street priced at \$60

\$95 printChef[®] (personal)
\$45 Tiling Helper[™]
\$35 Fill-in-the-Blank[™]

\$350 printChef Pro
60-day money-back guarantee

printChef is a print extension that
sits between any application & any
printer driver... it takes Print
Recipes that you design to control
any application's output...

Tiling Helper is a printChef plug-in. MindGate, printChef, and their logos are registered trademarks.
"print different", "Tiling Helper", "Fill-in-the-Blank", "Print Recipes", and "PrintRecipes" are trademarks, and
"it's not printing magic, it's printing science" are slogans of MindGate Technologies, Inc.

Booklets
Toner/Ink Control
New Paper Sizes
Multi-Ups & Labels
Mail Merging
Bar Codes
Logging & Security
Collected Files
Sign Your Faxes
Serialization
Tiling & Banners
Letterheads
Previews & Covers
Fronts & Backs
to your design...

for ANY printer and ANY application — all in one package!

To boost the printing power of **any application**,
call **(800) 648-6840**... or try our demos, print recipes,
& multimedia tutorials at **www.mindgate.com**

...for international callers
Worldwide: (931) 937-6800
Fax Orders: (931) 937-6801



MindGate[®] Technologies, Inc.
164 Oliver Smith Road
Flinville, TN 37335-5335

Order direct from us



Choose 407 at www.macworld.com/GetInfo

POINT OF SALE • INVENTORY CONTROL

Software & Hardware for:



Now iMac
compatible

- Retail/Wholesale
- Mail Order
- Internet Commerce
- Rentals
- Service/Repair
- Manufacturing
- FileMaker Tools

Fully Integrated Accounting
Multi-Site Polling • Cross Platform
Barcode Readers • Receipt Printers
Cash Drawers • Mag Stripe
Ribbons/Paper/Labels
Credit Card Authorization
& Deposit Software

www.posdirect.com

(800) 622-7670 • sales@posdirect.com

(618) 985-8237 vox • (618) 985-3014 fax

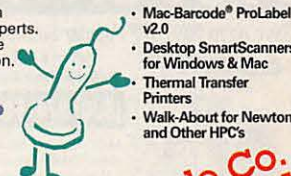
P.O.S. **DIRECT**



Order Free
CD Rom
on Web Site

Finally, a Powerful Thermal Transfer Printer for FileMaker Pro[®], Quark[®], Illustrator[®], or Mac-Barcode[®] ProLabel!

One Stop Shopping with
Friendly Support from the Experts.
Call Us for Free Bar Code
Consulting and Information.



Mobile! Simple! Fast! Accurate!

The Mac-Barcode Co.
800-733-7592
or Visit Our Web Site at:
www.mac-barcode.com
Tel: 508-746-4242 Fax: 508-746-6030

The Mac-Barcode Co.

BAR CODE SOLUTIONS

FREE EXPERT CONSULTATION!

FREE LIFETIME TECHNICAL SUPPORT!

MONEY-BACK GUARANTEE!

UPC/EAN, CODE 39, ITF, POSTNET, 2-D, and more!

1 1/2

"This is the best product of its kind,
and it's reasonably priced too."

— MacUser on PrintBar For Macintosh

Download Demo Software and Fonts Online at: www.bearrock.com

- **BAR CODE FONTS**
- **LABELING SOFTWARE**
- **SCANNERS/LASERS**
- **GRAPHIC UTILITIES**

Call Today to Order Your Free Bear Rock Product Pack
and Receive "Bar Code Basics: A Quick Reference Guide
to Understanding Bar Codes and How to Create, Print,
Read and Successfully Use Them."

**International
Bar Code Expertise**

Over 300,000
Products Sold Worldwide
in 10 Languages

800-232-7625

International: 530-672-0244
Fax: 530-672-1103



Attn: Students-Teachers-Schools

Authorware \$399	KPT Bryce 3D 115
CodaFinal97 245	LightWave 5.5 889
Debab.Toolbox 279	MiniCAD 7 315
Director 6 339	MS Office 98* 199
Dreamweaver 149	MS Word 6.01 99
Electric Image 1329	Norton Utilities 65
Eye Candy 3.0 74	Painter 5.0 205
FileMaker Pro 135	PageMaker 6.5 call
Final Draft 4.1 145	Photoshop 5.0 call
FireWorks 1.0 call	WordPerfect 3.5 49
Flash 2.0 145	
GoLive Cyber.3 175	
Kai's PowerT. 79	

*We accept Purchase Orders from schools.
*Call for Adobe, Microsoft & QuarkXpress!!

1-888-416-4555

www.ace-soft.com

Ace Software Express Inc.
666 Anderson Ave #3
Cliffside Park, NJ 07010
Tel:201-941-4949 Fax:201-941-5154

Choose 409 at www.macworld.com/GetInfo

SOFTWARE SALE

1-800-876-7529

MS Office 98..... 250	MS Word 98/5.0=150/85
MS Excel 98..... 150	MS Excel 5.0..... 80
MS Project..... 240	MS Frontpage..... 85
MS PowerPnt.....150	MS Office 97Pro.....275
Freehand 8.0..... 180	Flash 3.0 175
Freehand Studio.290	Dreamweaver 180
Sound Edit/Deck.250	Fireworks165
Virtual PC 2.....145	Live Picture..... 190
Corel Draw..... 140	WordPerfect 115
Final Draft 4.1.....150	Adobe Pagemill..... 45
Kai's power tools. .90	Bryce 3D.....135
3D Suite..... 375	Infini-D.....285
Poser 3.0..... 130	Expression.....130
Final Effects 3.0.....330	RayDream 3D.....88
Painter 5.0.....225	Painter 3D.....130
Studio 5.0.....130	Studio Effects.....350
Strata Pro450	Detailer.....75
Netobject Fusion.....150	Coda Final 97.....245
Daneba Canvas.....180	Daneba CAD.....260
Extensis PageTools.....80	QX-Tools 2.1..... 90
Portfolio 3.0.....80	Vector tools..... 90
Filemaker pro 4.0.....140	Homepage 3.0..... 75
ACT 2.8.....130	Norton Utilities..... 75
MS NT Server.....450	MS NT wkst.....150

softpro

Call 9AM to 6PM PST. PRICE SUBJECT TO CHANGE WITHOUT NOTICE/LIMITED STOCK. ALL TRADEMARKS ARE PROPERTY OF THEIR RESPECTIVE OWNERS.

STUDENTS, TEACHERS, SCHOOLS SAVE UP TO 80%

We'll Beat ANY Advertised Price!!



The Worlds Leading Desktop Publishing Bundle

Adobe, Microsoft, Lotus, & Borland products also available at the same great discount.

3D Suite 3.0 299	FileMaker Pro 4.0 109	PageTools 2.0.1 69
4th Dimension 6.0 E-Doc. 295	Final Draft 4.1 145	Painter 3.5 Web 199
Authorware 4.0 E-Doc 375	Final Effects Complete 249	Photofools 2.0 69
Canvas 5.0.3 179	Fireworks 99	Poser 3.0 109
Cliff Notes Studyware 19	Flash 3.0 99	PreFlight Pro 279
CodeWarrior Pro 3.0 119	FreeHand 8.0 139	QX-Tools 2.0 89
Conflict Catcher 4.0.1 59	HomePage 3.0 55	Ray Dream Studio 5.0 129
CorelDRAW Suite 6.0 139	Infini-D 4.5 279	Ray Dream 3D 69
CyberStudio 3.0 179	Inspire 3D 269	Softwindows 95 5.0 199
Debabelizer 3 299	Kai's Power Tools 3.0 79	Strata Media Point 1.2 179
Director 6.5 E-Doc 345	KPT Bryce 3D 3.0 115	Strata Studio Pro 2.5 545
Director MMS 6.5 675	LightWave 3D 5.6 895	Total Xaos Bundle 119
Director MMS 6.5 Upg 399	LivePicture 2.6 199	Videoshop 4.0 3D 159
Dreamweaver 1.2 99	Logomotion 2.1 65	VirtualPC 2.1 Win98 159
Electric Image 2.8 1329	Mathematica 3.0 Stu 149	Wacom Intuos 4x5 155
Encore 4.2 279	Mask Pro 189	Wacom Intuos 6x8 285
EndNote 3.0 99	MiniCAD 7.0.1 315	Wacom Intuos 9x12 399
Expression 99	NetObjects Fusion 3.0 99	WordPerfect 3.5.1 35
Eye Candy 3.0.1 75	OmniPage Pro 8.0 329	

WebSite www.electronicimage.com • Fax (925) 798-2464 • FREE Catalog

1-888-EDU-507

Choose 410 at www.macworld.com/GetInfo

STUDENTS!

Save up to 75% OFF Popular Software!

Call for a FREE Student Software Guide:

(800) 874-9001

Adobe • Microsoft • Autodesk
Kinetics • Corel • Macromedia
MetaCreations • Wacom
Symantec • Extensis • More!

www.JourneyEd.com

JOURNEY
Education Marketing

CALL FOR A FREE CATALOG: (800) 874-9001

Choose 411 at www.macworld.com/GetInfo

Savings for Students, Teachers, & Schools!

Visit our Web Site- <http://www.softwareshowcase.com>

Academic Discounts

The Software Showcase

CyberStudio Pro 3.0
Design fully dynamic web sites
\$179

FileMaker Pro 4.1
award-winning relational database
\$99

Flash 3.0
Interactive vector graphics and animation for the web.
\$99

Dreamweaver 1.2
The visual tool for professional web site design
\$99

Auto F/X Photo Edges 1.2 or 3	\$ 99.00	lomega ZipPlus 100	\$ 195.00
BBEdit 4.5.1	\$ 79.00	Kai's Power Tools 3.0.2	\$ 85.00
Boris FX 3.5	\$ 329.00	KaleidaGraph 3.0	\$ 119.00
CADtools 1.1	\$ 99.00	LightWave 3D 5.6	\$ 899.00
Canvas 5.0.3	\$ 179.00	Mac Academy Videos	\$ 35.00
ChemDraw Standard 4.0	\$ 199.00	MacDraft 4.3	\$ 145.00
ClarisWorks 5.0 Office	\$ 99.00	MagicMask	\$ 75.00
Coda Finale 98	\$ 269.00	Mathematica 3.0 Student	\$ 149.00
CodeWarrior Pro R3	\$ 119.00	Matlab 5.0 Student	\$ 99.00
Color It! 3.2	\$ 39.00	Myrmidon 2.1	\$ 39.00
ColorDrive 1.5.3	\$ 89.00	Neal's Type Efex	\$ 79.00
Conflict Catcher 4.0	\$ 59.00	Nisus Writer 5.1	\$ 79.00
Creator 2.1.1	\$ 149.00	ObjectDancer 1.5	\$ 199.00
Debabelizer 3.0	\$ 299.00	Painter 5.0	\$ 219.00
Director 6.5 EDoc	\$ 349.00	PhotoTools 2.0	\$ 89.00
Director 6.5 Studio	\$ 679.00	Poser 3.0	\$ 125.00
Doublur Pack	\$ 69.00	RayDream Studio 5.0	\$ 125.00
Dreamweaver 1.2	\$ 99.00	SoftWindows 98 5.0	\$ 169.00
ElectricImage Broadcast 2.8	\$ 1399.00	Studio Pro 2.5	\$ 549.00
EndNote 3.0	\$ 165.00	StuffIt Deluxe 4.5	\$ 59.00
Eudora Pro 4.0	\$ 35.00	Terran Media Cleaner Pro 3	\$ 199.00
Eye Candy 3.0.1	\$ 79.00	Test Sirlo 2.0.2	\$ 89.00
FLIGHTCHECK 3.3	\$ 199.00	Textbridge Pro	\$ 89.00
Final Draft 4.1	\$ 149.00	Total Xaos	\$ 119.00
Form 2.2.95	\$ CALL	Videoshop 3D 4.0	\$ 149.00
FreeHand 8.0	\$ 99.00	Virex 5.8	\$ 69.00
Genuine Fractals	\$ 129.00	Virtual PC 2.1 w/Win 98	\$ 159.00
HotMetal Pro 3.0	\$ 75.00	VirusScan 3.0	\$ 39.00
Homepage 3.0	\$ 59.00	Wacom Intuos 6x8 Tablet	\$ CALL
HyperStudio 3.1	\$ 119.00	WebSTAR 3.0	\$ 329.00
Inspiration 5.0 Higher ED	\$ 79.00		

We will beat any Advertised Price!!! "Call For Pricing On COREL Products"

(800) 699-1836

Software Showcase Inc. 417 Euclid Ave, Loch Arbor, NJ 07711

Phone (732) 660-8820 Fax (732) 660-8828

"School P.O.'s Welcome"

Call for a
FREE Catalog
(800) 699-1836
Priority Code: 1000

*Prices and availability subject to change
*Not responsible for shipping/special events

Ports for Your PowerMac!

SX Serial Card



"Fast, Solid and Reliable" - MacWorld

Better than a Switch or Juggler

- Provides simultaneous, trouble free use of multiple serial devices
- 2 or 4 port PCI serial cards available
- For Comm Toolbox savvy software
- SX-2 just \$199 SX-4 only \$299

Keyspan USB Card



Add USB to your PowerMac

- PCI card with 2 USB ports
- Use all the new USB devices on your existing Mac
- UPCI-2 just \$59!

Expand your iMac!

Keyspan USB Serial Adapter

Add 2 Mac serial ports to your iMac

- For use with tablets, PDAs, cameras and many printers
- Get two ports for the price of the single port solutions!
- USA-28 just \$79

Keyspan USB Hub

Connect more USB devices to your iMac

- USB compliant 4 port Hub
- UHUB-4X just \$69

USB Cables

- 6 ft. Device Cable (A-B) \$10
- 6 ft. Extension Cable (A-A) \$12

All products include 5 year warranty

KEYSPAN
www.keyspan.com (510) 222-0131



(800) 213-6356
code: KWM8

"I always look at the entire Macworld Shopper section to see what is available. I also like to check the prices of all the different products."

-Owner,
Computer Consultants

Source: Harvey Communications Measurement report, January 1999

Macworld[®]
SHOPPER

LifeART Professional Medical Clip Art



www.lifeart.com 1-800-543-3278

CADMOVER v.5 What good is a built in translator if it doesn't work?

You've worked hard and now it's time to use those files in another program. You try to import them & all you get is garbage. Not with CADMOVER. For over ten years we've been helping people beat their deadlines, no redrawing, no touch-ups.

File formats: DWG, DXF, EPSF, PICT, CGM, IGES, HPGL, STL, MiniCAD, DDES2, etc... Internal Features: scaling, 2D/3D views, font mapping and more. With 17 decimal place accuracy redrawing is a thing of the past.

800-579-2244 http://www.kandusoft.com/macworld

KANDU
software corporation

Mac[®] Networking at PC Prices!



16-User Internet Sharing Hub

All you need:

- One Palm Router
- One Modem
- One ISP account
- One Phone line

For Mac & PC

\$299

Palm Router



Fast Ethernet CardBus Card

\$129

Now you can network your PowerBook G3 at 10/100 Mbps with our new high performance 32-bit PC card. Get 100/200 Mbps with our Full-Duplex technology.

New



Stop Paying High Prices

Stop

Stop Paying for Low Quality

Most Affordable Lan Starter Kit

Start your own Ethernet network with this LK-810 Lan starter kit for the Mac and PC PCI bus computers.

\$99



Palm Size N-Way 2-Port Switch

Worlds' Smallest Switch
Worlds' Smallest Price

\$119

Connect 10 and 100 Mbps Mac & PC Users to the same network.

New



Also Carry: LC PDS, NuBus, PCMCIA Ethernet cards • SOHO, Dual Speed, Switch Hubs • Transceivers, SCSI & LVD Terminators and Game Controllers

Macsense products available through

All Macsense Products Include:

Please call or e-mail for FREE product catalog

ClubMac Mac Mall Mac Zone Mac WAREHOUSE



Free Technical Support

Macsense Connectivity Inc.
Tel: 1-800-642-8860 Fax: 408-744-1060
1290 Reamwood Ave. #B Sunnyvale, CA 94089
http://www.macsensetech.com

Networking Macs and PCs Leave You Stranded?

Let PC MACLAN Save You... Time, Money and Resources

Now whether you're a small business, home office or workgroup you can operate as efficiently as a corporate network with PC MACLAN — the leading solution for sharing printers, files, drives and more between Mac OS and Windows PCs, including remote and internet access.

- Add PCs to a Mac-based Network
- Print to AppleTalk or PostScript Printers from a PC
- Share Drives, Email and Applications Cross-platform

PC MACLAN is available for Windows NT, Windows 95 and Windows 3.x... and at our prices, PC MACLAN won't drown your networking budget!

www.miramarsys.com

1-800-862-2526



"For peer-to-peer networking... PC MACLAN 6.0 is the only choice."
— Macworld, Nov '95

Miramar Systems, Inc.

Redefine your environment.

Choose 408 at www.macworld.com/GetInfo

AVM MONITORS

20" SONY - \$399 Ref.

17" SONY - \$210 Ref.

Multiscan Monitors:

20" SONY 20 SE \$749
21" SONY \$1199 New
24" SONY GDM 90W01 \$3399 New

(888) 433-6066 / (954) 458-5886
<http://www.advance.org/avm/index.html>
401 N.W. 10 Terrace Hallandale, FL 33009

DFI 20" SONY COLOR MONITOR



800-390-7020

181 Salem Street, Malden, MA 02148

14" - \$99!
17" - \$239!
19" - \$499!



Active Buyers turn to the

Macworld
SHOPPER

Over 590,000 Macworld subscribers turn to the Macworld Shopper monthly. 531,250 of these buyers have taken action as a result of seeing an ad in the Macworld Shopper.

Macworld Shopper Purchase Study, 1995

CD-ROM PRODUCTION

1000 Retail-Ready Stamped CDs

Includes two color discs, four color glossy insert & tray cards, jewel case, and poly wrap. Complete turnkey — just send a CD-R and art files! Call for details.



CATALOGIC

Your CD-ROM Production Source™
<http://www.catalogic.com>

935 Sierra Vista Avenue • Mountain View, CA 94043
Telephone: 650-961-4649 Fax: 650-962-5333



- Easy to use labeling kits
- CD-R silk screening service
- Short run CD-R duplication
- 4.1Gb/hour standalone duper

CD-R media as low as \$1.49

800-255-4020



<p>BONUS 5 CDR FREE</p> <p>TEAC 4X12 CD-R bundle... \$399</p> <p>BONUS 5 CDR FREE</p> <p>Jaz 2GB 4x2x6 CD-RW ext. bundle... \$879</p> <p>BONUS 5 CDR FREE</p> <p>Pioneer DVD Recorder bundle... \$16,499</p> <p>AFFEX CD Color Printer bundle, 1440 dpi. Prints 2 CD at a time... \$1,399</p> <p>CD-RW Media... \$13 DVD R-Media... \$59</p> <p>LabelMaker with 100 FREE labels... \$39</p>	<p>BONUS 5 CDR FREE</p> <p>Panasonic 4x8 CD-R bundle... \$309</p> <p>BONUS 5 CDR FREE</p> <p>Yamaha 4x2x6 CD-RW bundle... \$429</p> <p>CD-R BLANKS as low as 99¢ also available TDK & More</p> <p>Shimad</p> <p>1-888-4-SHIMAD toll free 888-474-4623</p> <p>PH. 650-493-1234 http://www.shimad.com FAX: 650-493-1333</p>	<p>NEW</p> <p>Fastest CD-R 8x20 bundle... \$849</p> <p>MediaFORM DUPLICATOR: 3704 Autoloader CD2CD... \$7,499 2701 autoloader... \$2,399</p> <p>5900 8CD-R... \$5,999 2701 autoloader... \$4,899</p> <p>FOR CD DUPLICATION...CALL Jaz cart. as low as... 1GB \$79 2GB \$99</p> <p>SyJet cart...\$59 Zip cart...\$10</p>
---	--	---

Mitsui CD-R Media

\$1.39

200 Pack in Jewel Case



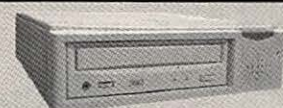
www.mediasupply.com



All packages ship by Federal Express

800-944-4237

400 Eagleview Blvd. • Exton, Pennsylvania 19341
Phone: 610-458-9100 • Fax: 610-458-9464



Yamaha 4260
4x/2x/6x CD-RW Drive

\$399

All drives include Adaptec Toast 3.5.4 & Direct CD, Cables, Media & Toll Free Support!
External \$449



Panasonic 4x8
4x/8x CD-R Drive

\$299

All drives include Adaptec Toast 3.5.4 & Direct CD, Cables, Media & Toll Free Support!
External \$349

CD-ROM SERVICES

Introducing
AMCIIS
(pronounced
"amsys") -
AMC's Imaging
and Information
Services
Division.

We can master,
duplicate, print,
package and
provide custom
silkscreening
services for your
project, large
or small.

Call us at
888.454.0100

or visit our
website at:
www.amciis.com

AMCIIS

**AMC
Direct**

MW1298

visit us online at:
www.mwm.amc-direct.com
SECURE ONLINE ORDERING!

NEW LOWER PRICE!



Only: External \$389. Internal \$299.

AMC DiscWRITE

FEATURED SPECIAL

AMC DiscWRITE 4x8 CD RECORDERS



We've just lowered the price on all of our CD-R and CD-RW drives, and this month we're featuring our 4x8 external recorder for only \$389! Be sure to call or check out our website today to take advantage of this and other hot deals!

AMC DiscWRITE 4x8 Recorder External **\$389.** Internal **\$299.**
Yamaha 4x2x6 CD-RW External **\$488.** Internal **\$388.**

CD-R DUPLICATORS



MEDIAFORM CD-2701

We've just reduced the price on our favorite CD duplicator. Copies can't get any easier than this - put in a stack of 50 CD's and press a button -- *that's it!* Start it tonight and you'll have your CD's ready to go tomorrow, completely unattended!

CD-4004 (1-4) CD Duplicator starting at **\$2,399.**
CD-5300 (1-4) CD Duplicator starting at **\$3,095.**
CD-5100 Desktop CD Copier **\$1,499.**
CD-2701 50 CD Duplicator **new lower price! \$4,999.**
CD-3704 100 CD Duplicator **NEW!** **CALL!**
CD-3707 200 CD Duplicator **NEW!** **CALL!**

* Offer good only on select MediaFORM CD-ROM Duplicators.
Call for details.

CD-R PRINTERS

PRIMERA SIGNATURE COLOR CD PRINTER

The Signature CD Color Printer from PRIMERA is the perfect way to add a professional touch to your CD-R's.



PRIMERA
TECHNOLOGY, INC.

\$1,195.

CD-R MEDIA



DiscWRITE Blank (no logo) 50 pk w/ jewel case **\$69.99**
Mitsui CD-R (silver) 25 pk w/jewel case **\$49.99**
Mitsui CD-R (silver) 100 pc spindle **\$159.99**
Ricoh Printable CD-R (white or champagne) 100 pc bulk **\$159.99**
Ricoh CD-R (platinum) 100 pk w/ jewel case **\$159.99**
TDK CD-R, CD-RW Media **CALL!**
AMC DiscWRITE special formula CD-R Pens 4 pk **\$6.95**

iMAC PERIPHERALS



FOR USB - CALL AMC!

AMC has a complete selection of USB peripherals for your iMac, including scanners, printers, digital cameras, joysticks, etc.

Call or visit our website at **www.amc-direct.com**
for our complete USB selection!

**CALL
FOR
OUR FREE
CATALOG
TODAY!**



Or request one
online at:
www.mwm.amc-direct.com/catalog

888.558.3187

Mac Pro Systems & Software Since 1988

Buy • Sell • Trade • Upgrade • Repair
New • Used • Refurbished

Small Ad **Lowest Prices**

Any Ad is a Mac Pro Ad
Check out our Wholesale Specials @

www.mac-pro.com

800-525-3888

fax: 408-369-1205

Mac POWER

Sales & Service, Inc.
BUY • SELL • TRADE
UPGRADE • REPAIR

New • Used • Refurbished

- Powerbooks
- PowerMacs
- Performas
- Quadras
- MacII-LC
- Monitors
- Printers
- Peripherals
- Ram
- Parts

Call now for best prices!

888-275-POWER

Fax: 408-448-6132
San Jose, California, 95123

MacGlobal

SYSTEMS AND PERIPHERALS • SALES AND SERVICE

Performas

410/466/476 Call
550 5/160 \$450
580 5/500/CD \$750
631 8/500/CD \$450
6200 8/16/CD \$550
5200 8/500/CD \$850

PowerBooks

520 4/160 \$399
520C 12/240/19.2 \$450
540C 4/320 \$650
5300 8/500 \$650

Quadras

630 8/250 Call

Power Macs

G3 Call
7200 8/500 Call
7500 16/500 Call
8500 16/500 Call

Printers

Color Stylw Pro \$185
Stylw II \$185.00
Stylw 1200 \$175
Laser 300 \$299
Laser 320 \$450
Laser 4/600 Call

Memory

4 MB 72-pin \$12
8 MB 72-pin \$20
16 MB 72-pin \$33

Monitors

14" Color \$195
15" App. Multi. \$265
17" App. Multi. \$450
20" GS \$540



**WE REPAIR
MACS!**

TOP DOLLAR paid for
memory, PowerBooks
and CPUs!

[800] 722-8864

Phone: [408] 265-6653

Fax: [408] 265-6660



Choose 402 at www.macworld.com/GetInfo



800-951-1230
MACBASE.COM

Int'l (714) 428-0777 University, School, Gov. & Fortune 1000 P.O.'s Accepted! FAX (714) 428-0778

NEW SYSTEMS

NEW! G3MT/333 128/9UW/CD 2899
NEW! G3MT/300 64/8G/CD/ZIP 2299
NEW! G3DT/300 64/6G/CD/ZIP 1899
G3 DT/233 32/4G/24XCD 1299
G3 DT/266 32/4G/24X/ 1449
G3 DT/266 32/4G/24X/Zip 1549
G3 MT/266 128/4G UW/24X 2299
4400/200 PC COMPATIBLE 999
5400/180 16/2G/CD 849
8600/300 32/2G/CD/ZIP CALL
9600/300 64/4GB/24XCD/ZIP CALL
9600/350 64/4GB/24XCD/ZIP CALL

NOTEBOOKS

G3/233 32/2G/CD/12.1 TFT 2059
G3/233 32/2G/CD/14.1 TFT 2599
G3/266 64/4G/CD/14.1 TFT 3299
G3/300 64/8G/DVD/14.1 TFT CALL
G3/233 32/2G/20XCD/12.1 STN 1799
G3/250 32/4G/20X/MDM TFT 3199
G3/292 64/8G/20X/MDM TFT CALL
1400C/166 16/1GB/CD TFT CALL
DUO DOCK II PLUS 179
EMATE 300 / NEWTON CALL
540C 20/500/MDM CALL

REFURBISHED

Duo 2300c 8/750 759
PB 1400C 16/1.3GB/CD 1259
PB 3400C/180 16/1.3GB/CD 1459
PB 3400C/200 16/2G/CD 1649
PB 3400C/240 16/3G/CD 1749
PM 6400/180 16/1.6/CD 659
PM 5500/225 32/2G/CD CALL
PM 8600/300 32/4G/CD/ZIP CALL
PM 9600/300 64/4G/24X/ZIP CALL
1705 17 inch Monitor 329
Apple 15AV 269
Color Stylewriter 4500 219
Color Stylewriter 6500 269

SOFTWARE

ADOBE PHOTOSHOP 295
ADOBE ILLUSTRATOR 249
ADOBE PAGEMAKER 279
ADOBE PREMIER 289
ADOBE AFTEREFFECT Production 1129
MACROMEDIA FREEHAND 229
MICROSOFT OFFICE 229
EMATE SHARE IP 5.0 399
APPLE OS 8.0 59

**1000'S OF PRODUCTS
IN STOCK. CALL US FOR
LATEST PRICING!**



* indicates refurbished product. MacBase is not an Authorized Apple Dealer. Returns subject to restocking fee. Prices reflect C.O.D. or CASH and are subject to change without notice. P.O.'s subject to approval. All trademarks are property of their respective companies.

Editors' Choice: AVD 4x2x6!



To celebrate Macworld's selection of Mediastore's AVD Yamaha 4X/2X/6X CDRW as Editor's Choice, we'd like to uncork a low price and share it with our friends!

CD Duplication

MULTIDRIVE Duplication Systems: Standalone

SEE! One2One Quick CD Duplicator - fast copy of one CD
MediaFORM 4004 CD-2CD + HD Duplicator

SEE! MediaFORM 5900 8-CD-Recorder Duplicator

SEE! CD CyClone 30-CDR Duplicator - 120 CDs/hour

AUTOLOADER Duplication Systems: Standalone

MediaFORM 2701 50-CD Duplicator - affordable autoloader
Champion 150-CD Duplicator - upgrade to two drive system!

Cedar CD Duplicator & Printer all in one unit - print + dupel!

MediaFORM 3704 100 CD Duplicator - 4 drives!

MediaFORM 3707 200 CD Duplicator - 7 drives!

\$1495
\$2399
\$6999
\$23995

\$4995
\$5999
\$7685
\$8350
\$12200

Extreme Jaz 2/CD-R Duos

the great JAZ 2GB giveaway!

Get the Jaz 2GB drive at a Jaz 1GB price! Includes 1GB cartridge ~ or get a 2GB cartridge for only \$50 more. Limited offer.

Extreme Kits

Panasonic 4X/8X + Jaz 2GB **\$749**
Teac 4X/12X + Jaz 2GB **\$799**
Yamaha 4X/2X/6X CDRW + Jaz 2GB **\$849**
Yamaha 4X/4X/16X CDRW + Jaz 2GB **\$949**



Order a CD recorder kit online at www.mediastore.com and receive a CD Stomper for only \$29

AVD CD Recorders

AVD Kits

Panasonic 4X/8X **\$299** internal **\$349** external
Teac 4X/12X **\$349** internal **\$399** external
Yamaha 4X/2X/6X CDRW **\$399** internal **\$449** external
Yamaha 4X/4X/16X CDRW **\$499** internal **\$549** external
Bare internal Panasonic 4X/8X CDR **\$255** Online Only

Data Storage

Jaz 2GB Drive + 1GB cart

Get a 2GB cartridge for only \$50 more. While supplies last. External unit is in AVD enclosure.

\$349

\$399

Jaz 1GB cartridges \$79

Jaz 2GB cartridges \$119

SyQuest 1.5 SyJet cartridges \$59

CDR Media

As Low As **99¢**



Mitsumi media also available!

CD Labeling

Picasso CD COLOR PRINTER

Includes 10 free pieces of printable CD-R media!

\$1199

CD Stomper Pro Labeling Kit

\$59

ORDER TOLL FREE!



Product Prices and Availability Subject to Change

800.555.5551

open M-F: 7 a.m. - 6 p.m. (PST) • intl ph. 714-974-5551 • fax. 714-279-1690



MEDIASTORE
www.mediastore.com

Ad Code: BB-112

800-673-MACS

916 • 652 • 1880 FAX 916 • 652 • 1881 800 • 673 • 6227

MS Office 98
Office 98
\$149
Qty 5+ \$129

BONUS:
Buy ANY G3 or
PowerMac and get
MS Office 98 for only
w/purchase

68k Macintosh

Mac Iix 0/0-misc(U) 59 Mac Iixx 8/0-misc(U) 99
Mac Iixx 0/0-misc(U) 59 C/Q 610 8/0-misc(U) 149
Mac LC 200-misc(U) 69 C/Q 660 8/0-misc(U) 199
Mac IISI 1/0-misc(U) 79 C/Q 8/0-misc(U) 149
Mac IISI 0/0-misc(U) 99 Q650 8/0-misc(U) 199
Mac Iixx 0/0-misc(U) 99 Q700 0/0-misc(U) 149

FREE STUFF!!

Buy any 68k Mac Package Deal
& get a Motorola 28.8bps modem
or ethernet upgrade* FREE!!

Mac LC 10/80-13" mtr, key, msc, Work 2.0 (U) 179.00
Mac Iixx 8/80-13" mtr, key, msc, Work 2.0 (U) 189.00
Mac Iixx 9/80-13" mtr, key, msc, Work 2.0 (U) 199.00
Mac Iixx 4/80-13" mtr, key, msc, Photoshop 2.5LE 249.00
Mac Iixx 8/80-13" mtr, key, msc, MS Wks 2.0 249.00
C650 16/240/CD-13" mtr, kybd, MS Wks 2.0 349.00
Q650 16/240/CD-13" mtr, kybd, MS Wks 2.0 399.00
Q650 16/240/CD-14" mtr, kybd, MS Wks 2.0 449.00
Q650 32/2G/CD-20" color mtr, kybd 599.00
VGS80 16/240-14" mtr, kybd, PS 2.5LE 449.00
Q840 16/2G/CD-14" mtr, kybd, PS 2.5LE 599.00
Q950 20/2G-14" mtr, kybd, Photoshop 2.5LE 499.00
Network Server 500/132-NEW 2950.00

Quadra 650 16/240/CD-ENet (U)
16/240/CD
13" Color Mtr.
Ext Kybd.
Adobe Photoshop 2.5 LE OR Microsoft Works 2.0
\$399

PowerMacs

PwrMAC 6100-60 16/2G/CD (U)
Power PC
EtherNet
Upgradable to G3
\$449

PwrMac 7100-80 16/2G/CD (U)
Power PC
EtherNet
Upgradable to G3
\$549

PowerBase 240 MT (R)
16/2G/16xCD
503c 240 Mhz
Mini-Tower
\$699

Power 120 32/2 GB/24xkybd, mouse (U) 549.00
P5200 8/500/CD-13" Multiscan (R) 699.00
PM5400/5500 (R) & (U) 699.00
CALL
PM6100-60 16/240/kybd, mouse, ethernet(U) 349.00
PM6100-66 16/350/kybd, mouse, ethernet(U) 399.00
PM6100-60 16/2G/CD-kybd, msc, enet (U) 449.00
6200/6400/6500 (R) & (U) 449.00
CALL
PM7100-66 16/500/kybd, mouse (U) 449.00
PM7100-80 16/500/kybd, mouse (U) 499.00
PM7100-80 16/2G/CD-kybd, mouse (U) 549.00
G3 233/266/300 (R) & (U) 549.00
CALL

Visit Our Online Catalog Questions? E-Mail: sales@poweron.com

www.poweron.com

4323 Anthony Ct #1, Rocklin CA 95677 Mon-Fri 7a-6p PST Sat 10-5p

All Sales Final. No Cash Refunds Given
All Prices include 3% cash discount
Prices subject to change without notice
Gov't & School PO's Accepted

4 YEAR ONSITE WARRANTY
from \$59.95

WE SPECIALIZE IN
BUSINESS LEASING

Macintosh Ready 24x CDROMS

\$89 **\$119**
Internal External
Buy any 24x CDROM & get 10 CDs FREE
* Dragon's Lair * Dracula Unleashed
* Interactive * Internet Executive
* Mayo Clinic * Stowaway!
* Hell Cab * SiriusNet
* Mad Dog McCreo * Intech - CDROM
* 2000 Fonts * SpeedTools

HDs & CDROMs

ZIP/HD/CDROM Install Kits IN STOCK
Apple 2x 300+ CDROM-Internal (P) 49.00
Apple 12x 1800i CDROM-Internal (P) 149.00
Apple 24x 3600i CDROM-Internal (P) 179.00
CD External Cables-SCSI ch1 Incl (N) 39.00
HD External Cables-SCSI ch1 Incl (N) 49.00
Apple 240 MB SCSI-Internal 3.5" (P) 79.00
Apple 500 MB SCSI-Internal 3.5" (P) 109.00
2.1 GB IBM 5400rpm-Int 3.5" (P) 139.00
4.3 GB Barracuda-Int 3.5" (P) 299.00
1.2 GB Performa IDE-Internal 3.5" (R) 89.00
5.0 GB Performa IDE-Internal 3.5" (P) 199.00
Apple Floppy Drives-Manual/Auto (N) 99.00
Apple Floppy Drives-Manual/Auto (P/R) 79.00

Monitors

Apple 15" MS Mtr (U)
MultiScan
tilt/swivel base
Built-In Speakers
\$229

Apple 13" RGB-Trinitron, Color (U) 119.00
Apple 14" RGB-Trinitron, Color (U) 149.00
Apple 14" MultiScan-Color, Speakers (U) 199.00
Apple 15" MultiScan-Color, Speakers (U) 229.00
Apple 17" MultiScan-Color, Trinitron (U) 399.00
17" RGB-SuperMac/Radius/Rasterops, Color (U) 179.00
20" RGB-SuperMac/Radius, Color (U) 299.00
20" RGB-Trinitron, Color (U) 399.00
Apple 20" TPD-Two Page, w/ Chl (U) 99.00
Video Cables & Adaptors IN STOCK

Mac Stuff

E-Tech 56K Bullet Modem (N)
DATA
FAX
VOICE
\$99

E-Tech 28.8bps (N)
DATA/FAX
Software Incl.
(RETAIL) **\$39**
Motorola 28.8 bps (N)
DATA/FAX
(OEM) **\$29**

Apple Mouse I 22 5 Port Hub ENET 59
Apple Mouse II 32 9 Port Hub ENET 79
Mouse, 1 button N 16.50 LC-PDS ENET (N) 49
Mouse, 2 button (N) 25 PCI-32bit ENET (N) 49
Apple Ext Kybd I (U) 25 NuBus ENET (P) 49
Apple Ext Kybd II (U) 29 Tranceiver ENET 24.99
Apple Std Kybd I (U) 25 EtherNet Cables CALL
Ext Keyboard (N) 29 PhoneNet serial conn. 9.99
Alps Keyboard (N) 29 StyleWriter 1500(U) 159
Mouse Balls (N) 5 StyleWriter 2400(U) 179
10 pack Mouse Balls 35 LaserWriter IInt (U) 199
ADB Splitter (N) 7 LaserWriter IIG (U) 399
Keyboard Cable 9 HP 4MV (R) 1699
Alps Trackpad (N) 10 Epson Printers CALL
USB Hub-MacAll 69 TONER IN STOCK
USB Mouse-MacAll 39 INK IN STOCK



HAWKE

SYSTEMS

2550-A Chimney Rock Rd
Hendersonville, NC 28792

(800) 875-2610

Fax - (828) 693-7271
Direct Dial - (828) 693-7170
Email - MacHawke@AOL.COM

Specialists in Refurbished Macintosh Equipment

This Month's Specials Include:

ImageWriter II Printers with Cable - \$89.00
Apple Hi-Res Color Display with Cable - \$99.00
Mac IISI 5/80 with Nubus adapter, with Ext Kyb and Mouse
and Apple Hi Res Color Display - \$199.00
PowerMac 6100/66 24/500 with Ext Kyb and Mouse and
14" Apple Color Display
PowerMac 6200/75 24/500 with Ext Kyb and Mouse and
14" Apple Color Display
PowerMac 7100/80 24/500 with Ext Kyb and Mouse and
14" Apple Color Display

Visit Our Web Site for a Full Listing
www.MacHawke.com

Six Month Parts and Labor System Warranty

Service Parts
New, Factory Sealed Global Village Gold PowerPort Modems - \$59.00
Nubus EtherNet Cards - RJ45 - \$19.00 Pb 1xx Logic Brds - \$139.00
Mac IISI Nubus Adpt w/ fpu - \$25.00 Pb 1xx Floppy Drvs - \$109.00
Apple 1.4 Meg Floppy (w/t) - \$69.00 Pb5xx Floppy Drvs - \$119.00
Call for other Parts, Logic Board Repair and System Repairs

*** think mac ***

liquidation

Macintosh CPUs

Macintosh LCII 4/80 \$79
Macintosh IISI 5/80 \$99
Macintosh Quadra 900 16/500 \$399
Power Mac 6100/66 24/700/CD/DOS \$499
Power Mac 7100/80 24/700/CD \$549
Power Mac 7100/80AV 24/700/CD \$599
Power Mac 8100/100 24/700/CD \$649
Power Mac 8500/120 32/2GB/CD \$899

Powerbooks

Apple Powerbook 180 12/120/14.4 \$499
Apple Powerbook 520C 12/160/19.2 .. \$549
Apple Powerbook 540C 12/320/19.2 .. \$649

Printers

Apple Laserwriter IINT \$199
Apple Laserwriter IIF \$299
Apple Laserwriter Select 360 \$599
Apple Laserwriter Pro 630 \$699
Apple Color Laser 12/600PS (Defects) \$499
Hewlett Packard 4MV (11x17 Laser) ..\$1099

Monitors

Apple 12" RGB Display \$99
Apple 14" Color Display \$149
Apple 15" Multiscan Display \$199
Apple 17" Multiscan Display \$249
Apple 20" Multiscan Display \$599



615-793-2277

Think Compu Kid.

PO Box 70 • 173 Industrial Bld. • Laverne, TN 37086 • PH: 615-793-2277 • Fax: 615-793-0837

FAST CASH

www.mactraders.com

For All Macs & Peripherals - Working or not

TOP DOLLAR PAID

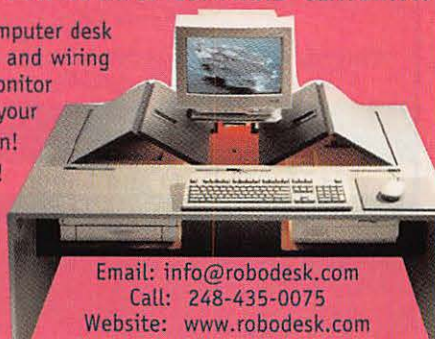
Mac Traders (800)990-0995

(310) 664-0664 Mon.-Fri. 9 AM-6 PM Sat. 10 AM-4 PM (P.S.T.) Fax (310) 664-0665
2300 Lincion Blvd. (One Light South of Pico), Santa Monica, CA 90405

HANGARDECK YOUR COCKPIT COMMAND CENTER....

The "HANGARDECK" computer desk stores all your hardware and wiring inside (except for the monitor and keyboard), leaving your workspace free for action! All in a 32"x 48" space!

This "clear the decks" environment is quiet, dust-free, attractive, and it locks!



Email: info@robodesk.com

Call: 248-435-0075

Website: www.robodesk.com

Think COMPUTER REVELATIONS



ALL APPLE PARTS & ACCESSORIES IN STOCK

Leasing
Rentals / Supplies
Service available in NYC area

1 800

275-9924

in NY 516 737-0800

FAX 516 737-0923

331E Dante Court

Holbrook, New York 11741

NEW & USED BOUGHT & SOLD

Choose 400 at www.macworld.com/GetInfo

Mac Sales

www.macs4sale.com

Powerbook Duo 280c

Color Mac Laptop

12 MB Ram/120MB HD

Sale \$399



Computers

Centris 610 8/230	\$199
Centris 650 8/230	\$249
Quadra 660AV 8/230/CD	\$249
Performa 635 8/250/CD	\$299
PowerMac 7500 32/1GB/CD	\$799
Duo 230 12/120/14.4	\$199
Powerbook 170 4/80/14.4	\$279
Powerbook 180 8/120/14.4	\$449

Quick Gifts!

Sonnet G3 Upgrades New	\$499
Mac - Boca 33.6 Modems New	\$59

Apple Monitors

13" Apple RGB Monitor	\$99
14" Apple Display	\$169
17" Apple Multiscan	\$299
20" Apple Multiscan	\$599

Printers

Laserwriter II NT	\$199
Laser Select 300/310	\$199/\$249

* Much More in Stock *

1-888-MACSALE

Buy • Sell • Repair • Parts

1-888-622-7253

Prices represent a Cash Discount. Products are Used/Refurbished unless noted.

"Custom Configuration Specialists"

- Dealers & International sales welcome!
- Govt., University & Corporate P.O.'s Welcome
- Best Prices, Service & Delivery.

SYSTEMS

G3/233DT 32/4GB/24XCD/KB	1279
G3/233MT 32/4GB/24XCD/56K/KB	1495
G3/266DT 32/4GB/24XCD/AV	1479
G3/266MT 32/4GB/24XCD/ZIP/AV	1595
G3/266MT 32/4GB/24XCD/ZIP/AV	1795
G3/266MT 128/4GB/24XCD/8MB	2195
G3/300DT 64/6GB/24XCD/ZIP	1889
G3/300MT 64/6GB/24XCD/6MB	2195
G3/300MT 128/4GB/24XCD/8MB	3295
G3/333MT 128/6GB/24XCD	2795
9600/350 64/4GB/24XCD/ZIP	CALL
9600/300/9600/233/9600/200	CALL
8600/300 32/4GB/12XCD/Zip	CALL
8600/250 32/4GB/CD/ZIP	CALL
8600/200 32/2GB/12XCD	1295
7600/132 16/1GB/8XCD	895
7300/200 32/2GB/24XCD/ZIP	1095
7300/180 16/2GB/CD/KB	995
7300/180 16/2GB/CD/DOS	1295
7100/80 8/500/CD	495
6500/300 32/4GB/12XCD	995
6500/300 32/4GB/12X33.6/AV/D	1095
6500/275 32/6GB/24XCD/56/ZIP	1095
6500/275 32/6GB/CD	849
4400/200 32/2GB/CD/DOS	895
5500/225 32/2GB/12X15"	995
5400/180 16/1.2/8XCD/15"	895
7200/120 16/1.2/8XCD	695
ALL IN ONE G3	1395
IMAC G3/233 32/4GB/24X15"	1289

Specials

PBG3/233	6500/275
14.1" Active	32/6G/24X
\$ 2295.	\$ 895.
6500/300	6500/275
64/4G/12X/Zip	32/6G/24X/56K
\$ 895.	\$ 895.

NOTEBOOKS

G3/300 64/8GB/DVD/56K/14.1"	4595
G3/292 64/8GB/20X56K/14.1"	4595
G3/266 64/4GB/20X56K/14.1"	3295
G3/250 32/5GB/20XCD/56K	2895
G3/233 32/2GB/20X56K/14.1"	2295
G3/233 32/2GB/20XCD/13.3"	1995
G3/233 32/2GB/20X12.1"	1795
G3/233 32/2GB/20X12.1"	1895
3400C/240 16/3GB/12XCD	1995
3400C/200 16/2GB/12XCD	1695
3400C/180 16/1.3GB/8XCD	1495
1400C/166 16/2GB/8XCD	CALL
5300C 16/1GB/16/750	895/849
5300C 8/750/16/750	649/699
2300C 20/16GB/14.4"	995
2400C/180 16/1.3GB	1495
540C 32/500/19.2MDM	795
180 14/120/14.4 Fax	395
AppleDoc Dock II	195

ARE YOU LOOKING FOR APCI SLOT MACHINES?

PowerMac 9600

G3/333Mhz upgrade

32/4GB/24XCD/ZIP

6 PCI Slot Machines

running at a speed of

a PowerMac G3/333Mhz

CALL 800-589-1234

HEWLETT PACKARD

LaserJet 5MP	595
LaserJet 6MP	779
DeskJet 890cd	389
DeskJet 1600CM	1395
LaserJet 4000N	1089/1395
LaserJet 4000TN	1529
LaserJet 4MV	1495
LaserJet 5000	1295
LaserJet 5000N	1795
LaserJet 5000GN	2295

GCC TECHNOLOGIES

NEW Elite SERIES	CALL
Elite XL-608	CALL
Elite XL-616	CALL
Elite XL-808	CALL
Elite XL-1208	CALL
Elite XL-1208 Platemaker	CALL

SEAGATE

Barracuda 18.2GIG

\$895.00

GLOBAL VILLAGE

TELEPORT 56K FLEX v.05	129
POWERPORT 56K PCMCIA	179
POWERPORT 56K ETHERNET	279
POWERPORT MERCURY/500	49

AGFA

SnapScan 310/600	179/339
SnapScan 600-ART LINE	339
Arcess II Solo	1289
Arcess II	895

EPSON

Epson Exp. 636 Executive	635
Epson Exp. 636 Artist 600dpi	795
Epson Exp. 636 Professional	1195

MICROTEK

Microtek Scanmaker V600	119
Microtek ScanMaker V310	79
Microtek ScanMaker III	1095

WE HAVE THE LOWEST PRICES

ON ANY MEMORY PRODUCTS

UMAX

Umax Astra 610s 3000dpi	99
Umax Astra 600s 600dpi/Polex	375
Umax Astra 1200s 600dpi/Pshp	419
Umax PowerLook II/2000	1195
Umax PowerLook III	3195

SONY

100ES/100GS	299/329
200ES/200GS	549/589
200PS/400PS	749/1049
300SF/500PS	1095/1229

NEC

E700 17"	549
E1100 21"	849
P1150 21"	899

PHILIPS/MAGNAVOX 4 YEAR ON SITE WARRANTY!

\$ 148.95	\$1201 To \$ 2000	\$ 209.95	\$3001 To \$ 4000	\$ 279.95
-----------	-------------------	-----------	-------------------	-----------

Toll free: (800) 589-1234

Int. (310) 470-9426 Fax: (310) 470-4956
2289 Westwood Blvd., Los Angeles, CA 90064

www.infinity-micro.com

Largest & Most Complete Mail order Source!

LEASING AVAILABLE!!!

Just Call and ask about our
quickleasing programs starting
as low as \$99.00 per month
Call and ask for Ext. 135

SOFTWARE

Adobe Photoshop version 5.0	295
Adobe Illustrator version 7.0	279
Adobe Pagemaker vers. 6.5	278
Adobe After Effects	1095
Quark Express package	699
Microsoft Office package 98	295

RASTEROPS

MC 620 17"	439
MC 6315 17"	585
MC 7515 19"	795
MC 801 21"	1095
MC 801HR 21"	1179
Rasterops 20" Black & white	195

PressView 21SRw Colorator

ColorMatch Daylight	2995
	2249

WACOM

ARTZ II 6X8	259
ARTZ II 12X12	359
ARTZ II 6X8 W. PAINTER	539
ARTZ II 12X18	619

i.o.m.e.g.a

ZIP DRIVE/ZIP PLUS	129/179
JAZZ 1GB/JAZZ 2GB	269/399

Prices are cash discounted/Subject to change w/o notice Visa/MC/Amex. Govt., university & corporate P.O.'s welcome. *factory reconditioned units.



www.icni.com

For Our Most Current Prices Please Visit Our Web Site

WIDER MACINTOSH MODELS, TOSHIBA NOTEBOOKS, IBM, COMPAQ, PARTS



PowerMac 7600

132MHz/16/1GB/CD/KB

\$729*

PowerBook 1400cs

12RAM/750HD

\$949*

Apple Monitor 17"

750 Vision **\$389***

Apple Original

24xCD-ROM SCSI

\$159*

Apple Monitor 15AV

Multi Scan **\$259***

PowerMac 8500

132MHz/16/2GB/CD/KB

\$799*

Duo 2300c

100MHz/40/750HD/Modem

\$689*

Apple PowerBook Hard Drive

500MB, 750MB, 1GB

\$99 \$119 \$159

RECONDITIONED POWER MACS

9500	233MHz	16/2GB/CD/KB	\$1199
9500	200 MP	32/2GB/CD/KB	\$1289
9500	132MHz	16/1GB/CD/KB	\$1049
8600	250 Mhz	32/4GB/24xCD/Zip/KB	\$1549
8600	200 Mhz	32/2GB/12xCD/Zip/KB	\$1359
8500	180Mhz	16/1GB/CD/KB	\$949
8500	132MHz	16/1GB/CD/KB	\$899
7600	132 Mhz	16/1GB/CD/KB	\$729
7500	100 Mhz	16/1GB/CD/KB	\$689
7300	200 Mhz	32/2GB/12xCD/KB	\$1095
7300	180 Mhz	16/2GB/12xCD/KB	\$1029
7200	120 Mhz	16/1GB/CD/KB	\$679
7200	90Mhz	8/500MB/CD/KB	\$609
6500	275MHz	32/4GB/12xCD/KB/Mod/TV	\$1059
6500	250MHz	32/4GB/24xCD/KB/Mod	\$999
6500	225MHz	32/3GB/12xCD/KB/Mod	\$879
5500	225MHz	32/2GB/ETH/24xCD/Mod15"	\$1039
4400	200MHz	32/2GB/12xCD/KB	\$829

RECONDITIONED POWER MACS NuBus

8100	110 Mhz	16/1GB/CD	\$679
8100	100 Mhz	16/1GB/CD	\$599
8100	80 Mhz	8/1GB/CD	\$559
7100	80MHz	8/500MB/CD	\$549
7100	66MHz	8/250MB/CD	\$509
6100	60MHz	8/250MB	\$359
6100	66MHz	8/250MB	\$395

RECONDITIONED POWERBOOKS & DUOS

3400c	240MHz	16/3GB/12xCD/Mod/ETH	\$1879
3400c	200MHz	16/2GB/6xCD/Mod/ETH	\$1779
3400c	180MHz	16/1GB/6xCD	\$1549
1400cs	166MHz	16/1GB/12xCD	\$1649
1400c	133MHz	16/1GB/8xCD	\$979
1400c	117MHz	16/1GB/6xCD	\$1095
1400cs	117MHz	12/750MB	\$949
5300c	117MHz	32/1GB	\$979
5300c	100MHz	16/750MB	\$795
5300cs	100MHz	8/500MB	\$695
540c	33MHz	4MB/320MB/Mod	\$595
520c	33MHz	4MB/160MB/Mod	\$529
520	33MHz	4MB/160MB/Mod	\$479
180c	4MB/160MB		\$349
170	4MB/120MB		\$285
DUO 2300c	100MHz	8MB/750MB/Mod	\$679
DUO 280c	33MHz	4MB/120MB/Mod	\$379
DUO Dock Plus			\$159

RECONDITIONED PERFORMAS

6400	180MHz/16/1.6GB/Mod/CD/KB	\$739
6360	160MHz/16/1GB/Mod/CD/KB	\$649
5400	180MHz/16/1GB/CD/Mod 15"	\$899
5200	75MHz/8/500MB/CD/Mod 14"	\$699

UPGRADES

WITH ORIGINAL APPLE LOGIC BOARD

PM 8500 LOGIC BOARD UPGRADE
FROM Q800, Q840AV, PM 8100 TO 8500 **\$769**

PM 7600 LOGIC BOARD UPGRADE
FROM PM 7200 TO 7600 **\$495**

DUO UPGRADE 200 Series To 2300 **\$449**
200MP/233MHz Processor Upgrade **\$265/\$179**

132MHz/180MHz Processor Upgrade **\$49/\$119**

UPGRADE YOUR POWERMAC To G3 As Low As \$449

6100,7100,8100 To G3 215-225MHz Sonnet	\$449
6100,7100,8100 To G3 240-250MHz Sonnet	\$589
6100,7100,8100 To G3 257-266MHz Sonnet	\$695
7300 Through 9600 To G3 233MHz Sonnet	\$459
7300 Through 9600 To G3 266MHz Sonnet	\$649
7300 Through 9600 To G3 300MHz Sonnet	\$839

CD RECORDERS By Fantom

YAMAHA 400AT 4xCD (Ext)	\$439
YAMAHA 4x2x6 CD Rewritable (Ext)	\$469
Panasonic 4x8 CD (Ext)	\$369
Carravalle 8x20 CD (Ext)	\$889
Ricoh 2x2x6 CD Rewritable(Ext)	\$399

Apple Original
Hard Drive SCSI
1.2GB \$99 / 2.1GB \$149

1.800.472.4921

Fax: (310) 445-6611 Tel: (310) 445-6600

FAX TOLL FREE FROM JAPAN: 00-31-114211

11755 Exposition Blvd., Los Angeles CA 90064

MONITORS

APPLE VISION 850 AV 20"	\$1195
APPLE VISION 850 20"	\$995*
APPLE 20" Multi Display	\$695*
APPLE VISION 750 17"	\$389*
APPLE 720 Multi Display 17"	\$395
APPLE 15" AV Multi	\$259*
APPLE Multi Scan 14"	\$159
APPLE RGB 13"	\$99*
NEC E500/E700	\$268-509
NEC 21" P1150/E1100	\$1089-979
SONY 15" 100ES/15"100GS	\$269-299
SONY 17" 200ES/17"200GS	\$439-499
SONY 21" 500PS/19"400PS	\$1249-799
VIEWSONIC 15"E655/ G653	\$215-229
VIEWSONIC 17"G5771/ E771	\$369-395
VIEWSONIC 20" P810/ P815	\$1039-1199
OPTIQUEST 15" Q53-E655	\$185/195
OPTIQUEST 17" V775-V773	\$395/\$339
OPTIQUEST 20" Q100/ 19" V95	\$869-547

PRINTERS

APPLE LaserWriter 12/640PS	\$775*
APPLE LaserWriter 16/600	\$939*
APPLE LaserWriter IINT	\$259*
APPLE LaserWriter 8500	\$1695
APPLE LaserWriter 2500	\$219*
APPLE Color StyleWriter 4100	\$205*
APPLE Color StyleWriter 4500	\$229*
EPSON STYLUS 800	\$249
HP LASER JET 6 LXI	\$389
HP LASER JET 4000 N	\$1399
HP LASER JET 4000 TN	\$1549

STORAGE & MEDIA

IOmega JAZZ 2GB DRIVE Ext.	\$299
IOmega JAZZ 2GB Cartridges	\$87
IOmega ZIP Drive 100MB Int.	\$98
IOmega ZIP Cartridges 100MB (PK 10)	\$85
VST ZIP Drive 100MB For PowerBook G3	\$219

SOFTWARE

Adobe Photoshop v5.0	\$329
Adobe Illustrator v7.0	\$209
Adobe Premiere v4.2	\$339
Adobe After Effect v3.1	\$329
Microsoft Office 98	\$249

Prices Subject to Change Without Notice • All Prices reflect 3% Cash Discount • * Refurbished
ICN is Not An Authorized Apple Dealer • All Trademarks Are Property Of Their Respective Companies.

www.lacc.com

LA
computer center

800-689-3933

450 N. Oak St.
Inglewood, CA 90302
Service (310) 671-4444
Fax (310) 671-9565

5 minutes from LAX Airport
Monitors SONY

Apple® 15" AV	299.	Sony 100ES/GS	269./ 279.
Apple® 720 17"	429.	Sony 200ES 17"	399.
Apple® 750 17"	599.	Sony 200GS/PS	499./ 699.
Apple® Color Sync 17"	799.	Sony 400PS	779.
Apple® 850 AV 20"	1199.	Sony 400PS	1199.
Apple® Color Sync 20"	1399.	Sony W900	CALL.
Apple® Studio LCD Display	CALL.		

ViewSonic

Q41 14"/Q51 15"/Q71	149./150./249.
EA771 17" 1024x768 w/spk. 28dp	429.
G771 17" 1024x768. 27dp	379.
G790 19" 1280x1024 28dp	679.
P775 17" 1600x1280 25dp	499.
PT775 17" 1600x1200 25dp	549.
P815 21" 1600x1200 25dp	1099.
G810 21" 1600x1200 25dp	899.
P810 21" 1600x1200 25dp	999.
View Panel VPA 150	1199.

All prices subject to change without notice
* All Prices reflect cash discount
* reflects Factory refurbished units

**MC7515 19" .22DP
1600X1200 Monitor**
\$639!

Mc 620 17" 28dp 1152X870	349.
Mc 6315 17" 22dp 1280X1024	449.
Mc 7515 19" 22dp 1600X1200	639.
Mc 2110 21" 28dp 1600X1200	CALL.
Mc 801 21" 22dp 1600X1200	979.
Mc 801HR 21" 22dp 1600X1280	1149.

**21" .22DP
1600X1200 Monitor MC801**
\$979!

4400/200 DOS

• 32MB
• 2GB
• 12CD
• 300S Card
\$899

G3 233MHz

• 32MB
• 4GB
• 24XCD
• Desktop
\$1249

G3 333MT 128/2-4GB Wide/24x	2599.
G3 300MT AV64/8GB/CD24xZIP	1999.
G3 266MT 32/4GB/24x	1299.
G3 266MT 32/6GB/24x/AV	1699*.
G3 266MT 128/4GBW/24x/Zip/6MB VR	1899*.
9600/350 64/4GB/24XCD	CALL.
9600/300 64/4GB/24CD	CALL.
9600/233 32/4G/12xCD	CALL.
9600/200MP 32/4G/12xCD	CALL.
8600/300 32/4GB/24XCD/ZIP	1299*.
8600/250 32/4GB/24XCD/ZIP	1199*.
8600/200 32/2G/CD	1099*.
8500/180 32/2G/8XCD	999*.
7300/200 32/2G/CD/KBRD.	CALL.
7300/180 16/2G/12xCD/KBD.	CALL.
4400/200 32/2GB/12x	799*.
6500/225 32/3G/12x/fax	749*.
6500/250 32/4GB/CD/fax	849*.
6500/300 64/6GB/CD/Zip	CALL.
IMAC & ALL IN 1 G3'S	CALL.

SERVERS

G3/233 64/4G UWide/CD/Share	2499.
G3/266 128/2-4G UWide/CD/Share	3199.
G3/300 128/2-8G UWide/CD/Share	3499.
9650/350 64/4G/20X	2699.

EPSON PRINTERS

Epson Stylus Color 800/800	109*./219.
Epson Stylus Color 850/700	325./225.
Epson Stylus Color 3000	1199.
Epson Stylus Photo EX	449.

Epson Pro XL

\$329*
Post Script Option \$249.
Ethernet Option \$349.

G3 292MHz

• 64MB
• 8GB
• DVD
• 14.1 Active
• 56k Modem
\$3999

G3 233MHz 32/2G/20X/12.1DSTN	1599.
G3 233MHz 32/2G/20X/12.1DSTN/56K	1699.
G3 233MHz 32/2G/20X/TFT/13.3TFT	1899.
G3 233MHz 32/2G/20X/TFT/14.4TFT	2099.
G3 250MHz 32/4G/20X/56K/13.3TFT	2899.
G3 292MHz 64/8G/20X/56K/DVD	3999.
G3 300MHz 64/8G/DVD/56K/14.1TFT	4499.
1400c 166MHz 16/2G/CD	1299*.
1400cs 117MHz 12/1.2G	899.
3400c 180MHz 16/1.3G/CD	1199*.
3400c200MHz 16/2.0G/CD	1499.
3400c 240MHz 16/3G/CD/Modem	1699*.
2400c180MHz 16/1.2G	1299*.
5300c 16/750	899.
5300cs 8/500	699.
540c 4/320 / 520c 4/240 / 520 4/240	CALL.
DUO250* DUO280* DUO280C*	CALL.

Value	Price
\$701 to \$1200	\$157.99
\$1201 to \$2000	\$185.99
\$2001 to \$3000	\$217.99
\$3001 to \$4000	\$261.99

**WE BUY AND SELL
USED MACINTOSH**

Trade in your old MAC
for a new one. Top \$\$\$
paid for trade ins

Apple Printers

Apple® Laser 12/640	849*.
Apple® Laser 16/600PS	999*.
Apple® Laser 8500	1599.
Apple® Laser Writer 4/600*	CALL.
Color Portable 2200	299*.

Ultimate Rez 8MB Video Card

Ultimate Rez 8MB	399.
Mac Rocket w/4MB SGRAM	199.
8MB Twin Turbo Video Card	369.
Pro Rez 8MB	259.
4MB Twin Turbo Video Card	149.
Turbo TV	89.

**Quantum Atlas II 9GB
Ultra SCSI/Wide External**
\$399/\$459

**PHILIPS/MAGNAVOX 4 YEAR
ON SITE WARRANTY!**

**Digital Reality, Specializing in Rebuilt
Imagesetters complete PrePress Systems &
Digital Video**
www.DigitalReality.net
email:CLucero126@aol.com
3101 W.PCH suite 150 Newport Beach Ca. 92663
•phone 949- 574-3939
•fax 949- 574-3947

<p>SilkScreening</p> <p>Imagesetter - Agfa or LinoType 18" Wide</p> <ul style="list-style-type: none"> • Includes RIP • Adobe Postscript • 2400 DPI • Factory Refurbished <p>\$15,500</p>	<p>Pre Press System</p> <p>Complete Color Pre Press System</p> <p>Includes Power Mac G3 32/16, 17" Color Monitor, Software, Ex Keyboard, AGFA Color Scanner, Color Proof Printer, Imagesetter w/Rip Processor.</p> <p>\$22,950</p>	<p>Harlequin Rip</p> <p>Mac & Windows</p> <p>Only Two In Stock!</p> <p>\$5695</p>	<p>Dolev System</p> <p>SCITEX DOLEV 400/ 4UP IMAGESETTER WITH PSM SOFTWARE RIP FACTORY REFURBISHED \$40,000. INCLUDES 6 MONTH FULL WARRANTY INSTALLATION, DELIVERY AND TRAINING!!</p> <p>\$40,000</p>	<p>Spot Color System</p> <p>COMPLETE SYSTEM FOR SPOT COLOR</p> <p>Includes Power Mac, software, DyeSub color Printer, AGFA Imagesetter, and Densitometer.</p> <p>\$17,950</p>
<p>PlateMaking System</p> <p>Digital Platemarking Refurbished System</p> <p>Includes AGFA Imagesetter for process color, separations upto 150 lines/cm, Rebuilt plate processor, densitometer, postscript II Rip, Calibration software</p> <p>\$450 per mon</p>	<p>Howtek Scanner</p> <p>D4000</p> <ul style="list-style-type: none"> • 3.8d Optical • User Selectable • 600 RPM • Tungsten Light • Focus control <p>Bringing high quality color scanning to mid-range publishing print shop</p> <p>\$9,950</p>	<p>ECRM MAKO</p> <p>The best Imagesetter available with Punch</p> <p>Registration: Mako 3600 14" Harlequin Rip G3 300MHz Processor Densitometer</p> <p>\$1275 Per Month</p>	<p>ECRM Marlin</p> <p>Marlin: 18.1", Harlequin Rip, G3/300 MHz, Processor, Densitometer! \$1875 Per Month</p> <p>KnockOut</p>	<p>SAPHIR SCANNER</p> <p>High quality color scanner Lino Color light why pay \$4,500 for a high quality scanner when you can purchase a refurbished one!</p> <p>\$945</p>
<p>AVID® XPRESS</p> <p>XPRESS Workstation for Macintosh</p> <p>SYSTEM INCLUDES: Real Time effects, country kit 110v, beta-cam video, avid standards effects, Single Channel Controller 2</p> <p>Call!!</p>	<p>AVID® XPRESS</p> <p>XPRESS Elite Bundle</p> <p>Workstation SYSTEM INCLUDES: Real Time effects, country kit 110v, betacam video, avid standards eAudio, 3D realtime 8500 free software</p> <p>Call!!</p>	<p>Media 100LX</p> <p>9500/200MHz 128MB/2G/CD</p> <p>After Effects 3.0, 17" Monitor, Keyboard, 4100 w/SCSI Wide Array, Vicent Component, Batch</p> <p>demo unit 10,000</p>	<p>Scitex Station</p> <p>PM 9500/200/128MB/3GB/CD/ATI</p> <p>Edit on the first in dual channel realtime all the time system. Do Superbowl effects! ESPN effects w/ Devious effects and advance effects. Complete system for only</p> <p>demo unit 14,795</p>	<p>Targa 200ORTX</p> <p>TARGA2000 RTX</p> <p>SDX and Madras</p> <p>Call!!</p>

New & factory refurbished. Call for special government and educational discounts, We purchase used imagesetters call for bids

CALL THE MAC EXPERTS!

Your one-stop source for **everything Macintosh®**. Complete solutions and expert advice our specialty!
Call for the **absolute lowest prices** and immediate delivery on over **20,000 Mac® products!**

Us

- Our salespeople are some of the most knowledgeable in the business. They're not order takers and they don't push for a one time sale. After all, over half our business comes from repeat and referred customers!
- We have 800 line tech support for as long as you own your computer!
- We load over 160 megabytes of useful software on every computer.
- Every Mac® system is thoroughly bench tested, and then personally verified and approved by your specific consultant.
- We will customize your computer any way you need, and always with an exact description as to what we're including.
- We give you a free mouse pad with every system.
- We have no voice mail—there's always a human being on the other end of the line for tech, sales and management.
- We answer the phone: "how can we help you?" not "may I take your order?"
- We live in Oregon, where there is no sales tax and the people are friendly and polite!
- Even customized systems usually ship within 24-48 hours.
- Government and corporate purchase orders normally approved the same day.
- We take trade-ins, and we sell every style of quality Macintosh® possible.
- We have competitive prices on over 20,000 Macintosh® items.
- All we do is Macintosh®—our company is run entirely on Macs®.
- We offer you choices: buy over the phone, over the internet, or in person, all with the same great prices and super service!

Them

- They sell you a box.
- If you have a problem, they tell you to call the manufacturer. And then you get to wait on hold for a long, long time.

You

- Potentially one of the most important people in the world: our customer.

Toll Free tech support for as long as you own your computer!

Complete Mac system — only \$499!!!

Package 61W9812

Package includes pre-tested 6100/66 with 16 Mb RAM, 500 Mb hard drive, internal CD-ROM, a new 14" color display and extended keyboard. Only **\$499!!**

SAVE BIG on these complete packages!



Package 71W9812

Package includes pre-tested 7100/80 with 16 Mb RAM, 500 Mb hard drive, a new 14" color display and extended keyboard. Only **\$549!!**

• Both Systems are G3 Upgradable! •

Only while supplies last



Package 23W9812

PowerMac® G3 233 desktop, 64 mb RAM, 4 Gb Drive, 24x CD, 15" Color Display and Microsoft Office 98 plus Premiere 4.21LE! Only **\$1788**, or just **\$72 per month!**



Package 33W9812

PowerMac® G3 266 MHz Tower (factory ref) w/ 64 Mb RAM, 6 gig drive, 24x CD, internal Zip drive, 17" PowerMax Trinitron display, and Premiere 4.21LE! Only **\$2299**, or just **\$93 per month!**

Pictures may not match monitor in package

The iMac

Cool little computer—and make sure it's everything you need your Mac to be by calling the Mac® Experts for a complete analysis of your computing needs!

We're Hard Drive Experts!

Need an extra external drive? How about a custom-configured video production array? Our consultants will help you decide on the best price and performance in drives available today!

	Internal	External
1 Gb IBM Drive w/1 year warranty.....	\$149	\$199
2 Gb Quantum Viking 7200 RPM.....	\$189	\$249
4 Gb Seagate Barracuda 7200 RPM.....	\$249	\$309
4 Gb Seagate Cheetah LVD 10,000 RPM.....	\$589	\$699
9 Gb Seagate Medalist 7200 RPM.....	\$589	\$669
Call about our tremendous PCI Ultra-Wide SCSI controller special!		
Ref Omega Zip Plus 100 Mb w/cartridge	\$129	
Omega Jaz Two Gb w/2 Gb cartridge	\$329	\$329
PowerMax 24x CD-Rom	\$89	\$109
Panasonic 4x8 CD-Recorder	\$299	\$399
Yamaha 4x26 CD-Rewritable	\$359	\$489
Sanyo 8x20 CD-Recorder	\$769	\$879

NOMAI 540MB REMOVABLE DRIVE BLOWOUT!

Five times the capacity of a Zip, as fast as a hard drive, and at a lower price! Features 10 ms. seek time and sustained data transfer rate between 3 & 5 mb per second.

\$99!

We're Used Mac® Experts!

We'll take your Macintosh® computer in trade toward the purchase of any product we sell! Call one of our expert Mac® consultants for complete details! Or call for our complete inventory of pre-tested used machines—some of today's best Mac values!



We're Upgrade Experts!

200MHz 604e Upgrade Card.....	\$159	MaxPowr G3 210 w/1 512k 6100	\$495
233MHz 604e Upgrade Card.....	\$269	MaxPowr G3 210 w/1 512k 71/81	\$549
Crescendo G3 215-225 w/512k	\$489	MaxPowr G3 220 w/1 512k/110	\$549
Crescendo G3 240-250 w/1 Mb	\$688	MaxPowr G3 240 w/1 Mb/160 6100	\$679
Crescendo G3 257-266 w/1 Mb	\$788	MaxPowr G3 240 w/1 Mb/160 71/81	\$739
Crescendo G3 233 w/512 2:1	\$419	MaxPowr G3 300 w/512/150	\$769
Crescendo G3 266 w/1 Mb 2:1	\$599	MaxPowr G3 333 w/1 Mb/163	\$1239
Crescendo G3 300 w/1 Mb 2:1	\$829	MaxPowr G3 300 w/1 Mb/300	\$1949

We're Monitor Experts!

Model PM15T 25 mm dot pitch—up to 1280x1024	\$299
Model PM17T 25 mm dot pitch—up to 1280x1024	\$479
Model PM17TE+ 25 mm dot pitch—up to 1600x1280	\$649
Model PM20T 30 mm dot pitch—up to 1600x1280	\$799
Model PM20T+ 25 mm dot pitch!	\$899



PowerMax Trinitron® monitors are designed specifically for the rigorous demands of the Macintosh®. They ship complete with Mac®-ready cables and adapters, a three year warranty, and our satisfaction guarantee: If the monitor is not just right, we'll replace it for you!

MacUser Labs Reviews:

"Four Mice! A Power-Max Power Play" and "Not only do the PowerMax monitors display good-looking images, but (they) are affordably priced!" and "Nice price, nice image quality, nice controls — nice monitor!"

We're System Experts!

Closeouts Factory Refurbished Macs®! Prices limited to stock on hand—call today!

6100/66 16/500/CD	\$499
6360/160 16/1.2 Gb/CD	\$589
6500/225 32/3 Gb/CD	\$589
6500/250 32/4 Gb/CD/Zip	\$589
6500/275 32/6 Gb/CD/Zip	\$589
5400/180 16/1.6 Gb/CD w/Display	\$849
5500/225 32/2 Gb/CD	\$949
7300/200 32/2 Gb/CD	\$1149
6500/250 32/3 Gb/CD/Video Prod	\$1088
9500/200 32/2 Gb/CD	\$1399
8600/200 32/2 Gb/CD	\$1449
Special Limited Availability Closeout Macs®!	
6400/200 32/2 Gb/Avia Video Sys.	\$949
6500/275 32/4 Gb/33.6/Creative	\$1049

9600/200MP 32/4 Gb/CD	\$589
9600/233 32/4 Gb/CD	\$589
G3's at new low prices—build 'em your way!	
G3 Desktop 233 32/24x CD	\$1269
G3 Desktop 233 32/24x CD/Zip	\$1389
G3 266 Desktop 32/24x/Enet	\$1468
G3 266 Desktop 32/24x/Enet/Zip	\$1589
Ref G3/266 Tower 32/6 Gb/CD/Zip	\$1849
G3 300 Desktop 64/24x/Zip	\$1829
G3 300 Desktop 32/4 Gb/DVD	\$1999
G3 300 Tower 64/8 Gb/24x/Zip	\$2299
G3 333 Tower 128/9 Gb UW/24x	\$2879
You won't find better deals on PowerBooks® and all accessories than PowerMax!	
PowerBook G3 233 32/2 Gb 12.1 DuoSc.	\$2049
PowerBook G3 233 As above w/floppy	\$2229

\$649!

Model 5200: All-in-one is perfect for home & school!	
PowerBook G3 233 32/2 Gb 13.3 Active	\$2629
PowerBook G3 233 32/2 Gb 14.1 Active	\$2688
PowerBook G3 233 32/2 Gb 14.1 Active	\$2788
PowerBook G3 250 32/4 Gb 13.3 Active	\$3139
PowerBook G3 266 64/4 Gb 14.1 Active	\$3429
PowerBook G3 300 64/8 Gb 14.1 Active	\$4895
Ref 5300C 16/750	\$949
Ref 1400C/117 16/1 Gb/CD	\$1149
Ref 1400C/133 16/1 Gb/CD	\$1199
Ref 1400C/133 16/1.3/CD	\$1399
Ref 3400C/180 16/1 Gb	\$1488
Apple Battery for 3400 PowerBooks®	\$179

POWER MAX
Knowledge is Power

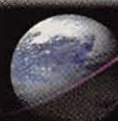
800-613-2072
Local: (503) 624-1827 • Fax (503) 624-1635
email: sales@powermax.com

Prices subject to change without notice. Prices reflect cash discount. Credit card orders strictly verified against fraudulent use. With use of credit card as payment customer acknowledges that some products are subject to final sale. All brand or product names are registered trademarks of their respective holders.

OR ORDER ON LINE AT
WWW.POWERMAX.COM!
OVER 20,000 MAC® ITEMS AT
YOUR FINGERTIPS!

We accept educational and corporate purchase orders, and are experts in financing for virtually any size business!





Open: 9am-8pm M-F / 10am-4pm Sat / 10am-5pm CST

E-Mail Us at: owc@macsales.com



ther World Computing

SERVING THE MAC UNIVERSE SINCE 1988

Other World Computing means Competitive Prices, Quality Products and NEVER a Surcharge for Credit Cards!



800-275-4576

FAST!
EASY!
SECURE!

On Web Commerce
Other World Computing has Easy, Fast, Secure Internet Ordering Now.



OWC
Online Ordering Is Online Now
www.macsales.com

• 24HR. ONLINE ORDERING & PRODUCT INFO •
• DAILY UPDATED PRICES & SPECIALS •

School/University/Government/Corporate Purchase Orders Gladly Accepted (SUBJECT TO CREDIT APPROVAL)

GET THE DETAILS ON ACCELERATING YOUR MAC ON OUR WEBSITE AT:
www.fastermacs.com

1.2 Gig Apple Fireball



\$109

• SCSI
• 9.5ms
• 1 Year Warranty

Internal
External: **\$159**

Mac OS 8.5 Compatible
FWB HD Tool Kit v2.5.x
Included with all Hard Drives
30 Day Money Back Guarantee
Full Manufacturer Warranty

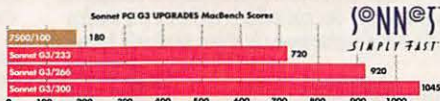
HardDrives Include
30MB of FREE SOFTWARE INSTALLED. EXTERNAL VERSION
FEATURES PLATINUM CASE WITH DUAL SCSI PORTS, PUSH-
BUTTON SCSI ID AND 40 WATT POWER.

All Processor Cards, Cache & Accelerators include
an other World 30 Day Satisfaction Guarantee.

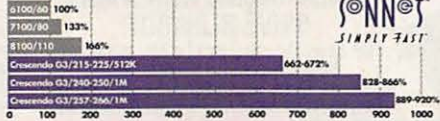
MORE POWER FOR NUBUS OR PCI PowerMacs!



Put a new G3 into your older PowerMac and experience the G3 difference!



Sonnet PCI G3 Upgrades For the PowerMac 7300/7500/7600/8500/8515/8600/9500/9515/9600; Workgroup Server 7350, 8550, 9650; Power Comp. PowerWave; UMAX J700 & S900; and DayStar Genesis 538.
MacWorld Editors' Choice!
G3-233mhz w/512k 2:1 Backside Cache...\$379
G3-266mhz w/1024k 2:1 Backside Cache...\$579
G3-300mhz w/1024k 2:1 Backside Cache...\$769
MacWEEK ★★★★★
G3-333mhz w/1024k 2:1 Backside Cache...\$1129



Sonnet Crescendo Nubus G3 Upgrades For the PowerMac 6100/7100/8100 & 8115; Performa 6110/6112/6115/6116/6117/6118; Workgroup Server 6150/8150/9150; Radius 81/110.
G3-225mhz w/512k 2:1 Backside Cache...\$459
G3-250mhz w/1024k 2:1 Backside Cache...\$659
G3-266mhz w/1024k 2:1 Backside Cache...\$739

XLR8 Adjustable G3 Upgrades For the PowerMac 7300/7500/7600/8500/8515/8600/9500/9515/9600; Workgroup Server 7350, 8550, 9650; Power Computing PowerCenter, PowerCurve, PowerWave, PowerTower; UMAX J700 & S900; and DayStar Genesis 538.
G3-220mhz w/512k 2:1 Backside Cache...\$369
G3-233mhz w/512k 2:1 Backside Cache...\$399
G3-266mhz w/512k 2:1 Backside Cache...\$559
G3-300mhz w/512k 2:1 Backside Cache...\$699
G3-300mhz w/1mb 2:3 Backside Cache...\$879
G3-333mhz w/1mb 2:1 Backside Cache...\$1199

Level 2 Cache Upgrades

256k L2 61/71/8100 PowerMacs/Performas **\$15**
1Mb L2 61/71/8100 PowerMacs/Performas **\$99**
512k L2 73/75/76/85/86 & Compatible Clones **\$69**
1Mb L2 73/75/76/85/86 & Compatible Clones **\$119**
1Mb HighSpeed for HighBus/Dual Proc. PCI **\$189**
512k L2 6360/6400/6500; StarMax; and PowerBase **\$49**
1Mb L2 6360/6400/6500; StarMax; and PowerBase **\$169**

SCSI hard drives

	Int.	Ext.
QUANTUM		
9.1Gb Atlas II CM39100AL 8ms 7200rpm 1024k 5yr W	\$439	\$489
18.2Gb Atlas III CM418200DS 7.8ms 7200rpm 1024k 5yr	\$1099	\$1159
SEAGATE		
4.5Gb Medalist Pro ST34520N 9.5ms 7200rpm 512k Cache 3yr	\$289	\$339
4.5Gb Cheatah ST34501N 8ms 10000rpm 1024k Cache 5yr	\$369	\$439
4.5Gb Barracuda ST34573N 9.5ms 7200rpm 512k Cache 3yr	\$469	\$519
6.5Gb Medalist Pro ST36500N 9.5ms 7200rpm 512k Cache 3yr	\$399	\$449
9.1Gb Medalist Pro ST39140N 9.5ms 7200rpm 512k Cache 3yr	\$499	\$549
9.1Gb Barracuda ST39173N 9.5ms 7200rpm 1024k Cache 3yr	\$579	\$629
18Gb Barracuda ST118273N 9.5ms 7200rpm 1024k Cache 3yr	\$1,099	\$1,159

Call or Visit www.macsales.com for other IBM, Seagate, & Quantum UltraWide and UltraWide SCSI Drives



2.5 Gig Quantum IDE

\$129

• 5400 rpm
• 9.5ms
• 3 Yr. Warr.

IDE hard drives

	Int.
2.5Gb Quantum Eclipse 5400rpm 3.5" 9.5ms with 3yr warranty	\$129
5.1Gb Quantum Eclipse 5400rpm 3.5" 9.5ms with 3yr warranty	\$179
7.6Gb Quantum Eclipse 5400rpm 3.5" 9.5ms with 3yr warranty	\$259
10.2Gb Quantum Eclipse 5400rpm 3.5" 9.5ms with 3yr warranty	\$319
12.7Gb Quantum Eclipse 5400rpm 3.5" 9.5ms with 3yr warranty	\$389

IBM, Maxtor, & Seagate also in Stock!



10 for \$89
Zip Disks

Removable Storage

	Int.	Ext.
Iomega Zip 100MB SCSI With 1 Cartridge	\$119	\$119
Iomega Zip Plus External With 1 Cartridge	HOT DEAL! \$159	
Iomega Jaz 10GB SCSI With 1 Cartridge	\$229	\$299
Iomega Jaz 20GB SCSI With 1 Cartridge	\$329	\$309
Iomega Zip Cartridges \$11 each		Jaz 1Gb Cartridges \$79 each.
Iomega Zip Cartridges 10 for \$89		Jaz 2Gb Cartridges \$85 each.
Panasonic CDR 4x8 with Toast & Media		\$379
Yamaha CDRW4260		
2X CD RW Writable/4X Recordable/6X Read w/ 1 cdr, 1 cdrw, Toast 3.5	\$449	\$499
Verbatim 74 Minute Gold CDR Media w/ Jewel Case	\$25 each.	50 for \$99 100 for \$185

HOT BUYS ON POWERBOOK SCSI and IDE HARD DRIVES



SCSI PowerBook hard drives

For PowerBook 100 series (except 150), 520/540(c), & Duo Series (except 2300)

500Mb Toshiba 2.5" SCSI with 1 Year Warranty **\$199**

IDE PowerBook hard drives

	Int.
For PowerBook 150/190(c)/3300/1400/3400 Series	
2.1GB Hitachi 4200rpm 12mm Slim with 3 Year Warranty	\$199
3.2GB Hitachi 4200rpm 12mm Slim with 3 Year Warranty	\$269
4.0GB IBM Travelstar 4200rpm 12mm Slim with 3 Year Warranty	\$319
5.4GB IBM Travelstar 4200rpm 12mm Slim with 3 Year Warranty	\$419
6.4GB IBM Travelstar 4200rpm 12mm Slim with 3 Year Warranty	\$479

Mac Memory Products

Memory listed by OWC is New with Lifetime Warranty and 30 Day Money Back Guarantee. All Memory products meet or exceed Apple Specifications.

30 PIN SIMMS Non-Parity for Older Macs

1 MEGABYTE 70 or 60 NanoSeconds	\$8
4 MEGABYTE 70 or 60 NanoSeconds	\$15
16 MEGABYTE 70 or 60 ns	SPECIAL! \$35

72 PIN SIMMS 2k Refresh 60ns

4MEG	\$9	8MEG	\$17	16MEG	\$23	32MEG	\$43
------	-----	------	------	-------	------	-------	------

168 PIN DIMMS 2k Refresh 70 or 60ns (specify)

	5V	EDO 5V	EDO 3.3V
16 MEGABYTE	\$29	\$29	\$39
32 MEGABYTE	\$49	\$49	\$59
64 MEGABYTE	\$89	\$89	\$99
128 MEGABYTE	\$249	\$249	N/A

10ns SDRAM for G3 Desktops and MiniTowers

32 MEGABYTE	\$47
64 MEGABYTE	\$105
128 MEGABYTE	\$199
256 MEGABYTE (for all G3's)	\$399

WallStreet & iMac G3 Computers Memory

32 MEGABYTE	\$59
64 MEGABYTE	\$109
128 MEGABYTE	\$199

Video Ram Memory Upgrades

256k PMac 7100/Quadra800/650	\$12
512k PMac 8100/QuadraLC's	\$15
1 MEG PMac 72/73/75/76/85/8600 & Compat.	\$19
4 MEG Motorola StarMax/PowerMac 4400	\$35
4 MEG G3 Video SGRAM	SPECIAL! \$29

OWC is a Techworks Authorized Reseller.
Call or Visit www.macsales.com for the best prices on Techworks Brand Memory.



Other World Computing

224 West Judd St., Woodstock, IL 60098
International: (815) 338-8685
Fax: (815) 338-4332



1-800-334-KIWI

Kiwi Computers • Save on refurbished Macs

Mac Computers

Prices do not include keyboard, mouse or monitor.

Performa 630 20/1 GB 4xCD	\$299
Performa 6200/75 32/1 GB 4xCD	\$449
PowerMac 6500/225 32/3 GB 12xCD 33.6	\$799
PowerMac 6500/250 32/4 GB 24xCD 33.6	\$899
PowerMac 6500/275 32/4 GB 24xCD 56k ZIP	\$999
PowerMac 5200/75 32/1 GB 4xCD	\$599
PowerMac 5500/225 32/2 GB 12xCD	\$949
Powerbook 1400c/117 16/1 GB CD	\$1249
Powerbook 3400c/200 16/2 GB CD	\$1649

Upgrades

Logic board upgrade prices are with exchange.

Performa 630 series to 6300/100mhz	\$349
Performa 630 series to 6320/120mhz	\$399
Performa 630 series to 6360/160mhz	\$499
Performa 6200 to 6360/160mhz	\$375
Performa 6300 to 6360/160mhz	\$299
Performa 6320 to 6360/160mhz	\$275
Performa 6200 to 6500/225mhz	\$549
Performa 6300 to 6500/225mhz	\$449
Performa 6320 to 6500/225mhz	\$425
Performa 5200 to 5500/225mhz	\$525
Performa 600/11vx to PowerMac 7100/80	\$475
Centris 650 to PowerMac 7100/80	\$399
Quadra 650 to PowerMac 7100/80	\$375
PowerMac 7200/75 to 7600/120mhz	\$489
PowerMac 7500/90 to 7600/120mhz	\$449
PowerMac 7200/120 to 7600/120mhz	\$399
Powerbook 190 series to 5300/100mhz	\$399
Math Coprocessor for P575 & P630	\$89

Monthly Specials

Performa 630 logic board	\$75
Performa 6200 logic board	\$249
Performa 630/6200/6300 power supply	\$49
Manual inject 1.44 internal floppy drive	\$49
Apple Plinktalk Microphone	\$12
Platinum 28.8 internal modem for P5200/6200	\$49
GV internal 56k modem for PM6500/5500	\$89

Visa/Mastercard/American Express No Surcharge.

Refurbished products have a 90 day warranty • Returns subject to a 15% restocking fee • Prices subject to change without notice.

Toll Free: 800-334-5494 International: 310-553-4507 Fax: 310-286-9667

Kiwi Computers, P.O. Box 67381, Los Angeles, CA 90067

Kiwi Computers is not an Apple Authorized Dealer. Mac, Power Mac, Performa, Powerbook, are trademarks of Apple Computer, Inc.

Macworld **Get** **Info**

www.macworld.com/getinfo

MacWorld's NEW Online Reader Service

THE BEST IN
REMANUFACTURED
Macintosh
COMPUTERS & PARTS

Holiday Specials!

- Power Mac 6100/66 \$669!
24MB RAM/500MB HD/CD-ROM
COLOR DISPLAY/KEYBOARD
- STYLEWRITER 1200 \$119!
BRAND NEW!
- 56K MODEM \$69!
EXTERNAL, FOR MOST DESKTOPS
- POWERBOOKS \$399!
MODELS STARTING AS LOW AS

**Pre-Owned
Electronics**

1-800-274-5343

Offices: 781-778-4600

Fax: 781-778-4848

VISIT US ON-LINE AT:

www.preowned.com

DIS0050



Largest Selection

and Best Prices

DISTRIBUTION on Hard Drives

All	C 610 8/160	99
	Q 610 8/230	125
	Q 650 8/230	150
	Q 800 8/230	199
	6100/60 16/250	299
	7100/66 16/500	375
Desktop	7200/75 8/500/CD	399
	7200/90 8/500/CD	449
and Tower	7200/120 16/1.2/CD	499
	7300/200 32/2/12X	749
Models	7500/100 16/1.2/4XCD	549
	7600/120 16/1.2/6XCD	625
Come with	7600/132 16/1.2/6XCD	649
a mouse	8100/80 16/1GB/2XCD	525
	8500/120 16/2GB/6XCD	725
	8500/180 32/2GB/CD	799
	8600/200 32/2GB/12XCD	849
	9500/132 32/2GB/12XCD	799
	9600/200 32/4GB/12XCD	999
	520C 4/160	399
	540 12/240/modem	399
	2300c/100 8/750	499
	5300/100 8/500	475
	5300C/100 16/750	699
	5300CE/117 32/1.1GB	799

Great

Warranties

HUGE

PARTS

INVENTORY

1251 Alma Court, San Jose, CA 95112

Phone: 408-280-1133 • Fax: 408-280-6840

BUY SELL TRADE

USED MACINTOSH!

ALL APPLE EQUIPMENT AVAILABLE!

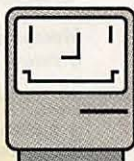
Year End Blowout!

- PowerBooks
- PowerPCs
- G3s
- 68040 & 68030 MACs
- Large Monitors

School POs
Welcome

Apple Color Monitor \$49
with any \$500 purchase

CALL FOR DETAILS



**The Computer
Exchange**

800.304.4639

sales/service: 404.355.5144 fax: 404.355.5461
500 Bishop Street • Suite E-3 • Atlanta, GA 30318

visit our new website: **mistermac.com**

Choose 406 at www.macworld.com/GetInfo

SHREVE Systems

For all this and more
check out our website!

<http://www.shrevesystems.com>



WE BUY MACS (318) 424-9791

WE STOCK MAC PARTS!

1-800-227-3971

FAX (318) 424-9771 • Technical Support (318) 424-7987
Customer Service (318) 424-9791 • Purchasing/Information (318) 424-9791
1200 Marshall Street • Shreveport, Louisiana 71101

PowerMac 5400/180

- 32MB of RAM
 - 1.6GB Hard Drive
 - 8X CD-ROM
 - 180-MHz PowerPC 603e
 - Refurbished
- \$879**

PowerMac 6500/250

- 32MB of RAM
 - Iomega ZIP™ Drive
 - 4GB Hard Drive
 - 12X CD-ROM
 - 250-MHz PowerPC 603e
 - Refurbished
- \$949**

\$99 BOARD BLOWOUT!

Take your pick for only 99 bucks! No exchange!

- Ilx logic board
 - Quadra 900 logic board
 - Centris 650 logic board
 - Quadra 650 logic board
 - Quadra 800 or 840 logic board
 - PowerBook 520 or 540 logic board
- \$99!**

Macintosh LC580

- 33-MHz MC68LC040
 - Built-in display
 - 8MB of RAM
 - 800MB Hard Drive
 - Includes mouse and keyboard
- \$649**
FREE refurbished



\$749 with internal 4XCD

PowerMac Upgrades

Quadra/Centris 610 to
PowerMac 6100/60
(refurbished)

As low as \$299!
with exchange of your working board

Quadra/Centris 650 to
PowerMac 7100/80 Upgrade
(refurbished)

As low as \$349!
with exchange of your working board

Quadra 800/840av to
PowerMac 8100/80
(refurbished)

As low as \$299!
with exchange of your working board

Performa 630 to
PowerMac 6300/120
(refurbished)

As low as \$399!
with exchange of your working board

Performa 6200/75
180-MHz Upgrade
(refurbished)

As low as \$399!
with exchange of your working board

PowerMac 6500/225

- 32MB of RAM
- 3GB Hard Drive
- 225-MHz 603e processor
- 12X CD-ROM
- Get a 6500/250 Business Edition for only \$929!

Factory Refurb **CALL** Factory Refurb **\$1099**

PowerMac 6500/300

- 300-MHz 603e processor
- 64MB of RAM
- 6GB Hard Drive
- 24X CD-ROM
- Internal Iomega ZIP™ Drive

Factory Refurb **\$1099**

PowerMac 4400/200

- 200-MHz 603e processor
- 32MB of RAM
- 2GB Hard Drive
- Internal 12X CD-ROM
- Built-in Ethernet

Factory Refurb **\$799**

PowerBook 5300cs

- 100-MHz 603e
- 16MB of RAM
- 750MB HD
- Dual-scan color
- Refurbished

FREE! ClarisWorks 3 and Carrying Case!



ADD A VIKING™ V90 PC CARD MODEM FOR ONLY \$100!

MACINTOSH LOGIC BOARDS

- 7200/90 logic board, refurbished \$349
- LC logic board, refurbished \$49
- LC II logic board, refurbished \$179
- Mac LCIII logic board, refurbished \$249
- Performa 630 logic board, refurbished \$199
- Quadra 800 logic board, refurbished \$99
- Quadra 840AV logic board, refurbished \$99
- Quadra 900 logic board, refurbished \$99
- Quadra 950 logic board, refurbished \$299
- Performa LC 550 logic board, refurbished \$249
- Performa 575/580 logic board, refurbished \$399

PRINTERS

- Apple StyleWriter 1200, refurbished \$149
- Apple StyleWriter 1500, factory refurbished \$199
- Apple Color StyleWriter 2400, refurbished \$139
- Apple Personal LaserWriter LS, refurb \$279
- Personal LaserWriter NTR, refurbished \$549
- LaserWriter III w/5MB RAM, refurbished \$699
- LaserWriter III w/5MB RAM, refurbished \$799
- Hewlett-Packard Deskwriter C, refurbished \$199
- Texas Instruments Micro Laser Pro E NEW \$699

Laser toner cartridges sold separately

VIDEO CARDS

- E-Machines DoubleColor SX NEW \$79
- RasterOps 24MX NEW, Nubus \$199
- Supermac 8.24 PDD Plus, Nubus \$199
- PowerMac HPV Card (1MB) \$74
- PowerMac Any Card (2MB) \$249

MONITORS

- AppleVision 750 17", refurbished \$549
- Apple MultipleScan 720, refurbished \$349
- Apple 12" RGB refurbished \$149
- Apple 14" AV NEW \$249
- Apple 14" Multiscan refurbished \$229
- Apple 15" Multiscan factory refurbished \$279
- Apple MultiScan 17" refurbished \$349
- Apple 20" Multiscan refurbished \$999
- Radius IntelliColor/20e factory refurbished \$999
- Vision 14" Multiscan NEW \$229
- Vision 15" Multiscan NEW \$279
- Radius Color Pivot LE refurbished \$299
- Radius Color Pivot refurbished \$249

NUBUS ADAPTERS

- Quadra 650AV Nubus Adapter \$69
- Quadra 610 Nubus Adapter \$69
- Ilx Nubus adapter w/math co-processor \$69

IMAGING PRODUCTS

- Apple Color OneScanner refurbished \$199
- Apple Color OneScanner 600/27 refurb \$299
- Color OneScanner 1200/30 transp. adapter \$149
- UMAX UMAX400 Scanner NEW \$199
- Apple QuickTake 200 refurbished \$349
- Apple QuickTake 150 refurbished \$229

PowerMac CPU SALE!

Performa 5200
12/500/4XCD
\$699
refurbished

9500/200
32/2GB/CD
\$1249
refurbished

8500/132
32/2GB/8XCD
\$949
refurbished

7500/100
16/1GB/CD
\$699
refurbished

7600/120
16/1GB/CD
\$749
refurbished

9500/120
16/1GB/8XCD
\$949
refurbished

APPLE WORKGROUP & WEB SERVERS

WGS 8550/200 16/2GB/8XCD refurbished \$1399

WGS 9150/120 16/500/CD, refurbished \$999

WGS 6150 16/500/CD, refurbished \$649

WGS 7250 16/1GB/CD, refurbished \$849

WGS 80 16/500/CD, refurbished \$749

WGS 95 8/500/CD, refurbished \$699

Color LaserWriter 12/600PS

- Supports Mac, DOS, UNIX, even Windows
- True 600x600-dpi with Color PhotoGrade
- Prints up to 12 pages per minute
- LocalTalk, Ethernet, and Parallel ports
- Setup kit included

\$1799
REFURBISHED



MAC LOGIC BOARD UPGRADES

- Personal NT to NTR upgrade \$99
- PowerMac 8100 to 8500/132 (exchange) \$549
- Quadra 950 to WGS 9150/120 (exchange) \$599
- Performa 5200/75 to Performa 5260/120 \$399
- Performa 630 to 6200/75 (exchange) \$299
- Performa 630 to 6300/120 (exchange) \$399
- Performa 6200 to 6320/120 (exchange) \$299
- Quadra 800 to PowerMac 8100/80 (exchange) \$299
- Quadra 660 to PowerMac 6100/60 (exchange) \$299
- Ilx/Ici to Centris 650 (retrofit upgrade) \$249
- PowerBook 190cs 100-MHz PowerPC™ Upgrade \$449

Save A Mac Foundation



\$39!
ClarisWorks 4
Internet Edition
NEW!
FREE Claris HomePage!

Newton 130
\$279
FREE Leather Carry Case and faxmodem! REFURBISHED

Mac LC series Power Supply
For LC, LCII and LCIII
REFURBISHED **\$10**

7500 Power Supply
NEW **\$229**

1.44 SuperDrives
STARTING AT **\$49!**
REFURBISHED
NO EXCHANGE REQUIRED!

Apple PlainTalk Microphone
Only \$10
REFURBISHED

POWERMAC 7200/75 LOGIC
ONLY \$149
BRAND NEW!

Mouse II Clone
Closely mimics the ADB Mouse II. Ergonomic and comfortable!
REFURBISHED \$10
ADB MOUSE II, NEW \$49

PowerComputing FACTORY REFURBISHED SYSTEMS

PowerCenter Pro 180MT
• 180-MHz PowerPC 604e, 2MB VRAM
• 32MB RAM, 2GB HD, 16XCD-ROM
NOW ONLY **\$899**

PowerBase 180LP
• 180-MHz PowerPC 603e, 2MB VRAM
• 16MB RAM, 2GB HD, 16XCD-ROM
NOW ONLY **\$599**

PC Compatibility Cards

- Genuine Apple!
- **PENTIUM 166 12" \$299**
REFURBISHED
- **586 100-MHZ 7" \$129**
REFURBISHED
- **PM6100 486/66 \$59**
NEW
- **FREE PC CD-Pack with purchase of a PC Compatibility Card!**

Newton Memory

Take \$20 off with Newton purchase!
2MB FLASH RAM CARD \$99
4MB FLASH RAM CARD \$149

\$199
BIG 11X17 COLOR!
Model M9500

Apple 11x17 Inkjet
• Prints 360-dpi up to 11x17!
• SCSI and parallel interfaces
• Prints transparencies
• Large CMYK ink tanks
• Supports Mac or PC!

QuickTake Cameras
Refurbished
AS LOW AS \$99!!

Products are refurbished unless indicated as "new". Prices reflect a 2% cash discount and are subject to change without notice. Returns are subject to a 15% restocking fee. Not responsible for typographical errors. All trade-ins MUST BE in working condition. Refurbished systems may include like-new components and may also include cosmetic blemishes which do not functionally impair performance of the hardware.
* indicates refurbished ** indicates factory refurbished

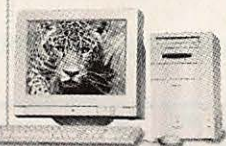
The Lowest Business Finance Rate Available

FREE Director V6.5 & PageMaker V6.5 w/Lease

- PowerPC G3/366MHz or UMAX S900 G3 384MB/18GB RAID/32X CD/1MB L2-Cache
- IMS 128bit Twin-Turbo 1600x1200 w/8MB Graphic Engine & SONY 21" Color Display - Trinitron Tube.
- Agfa Arcus II w/ Transparency 36-bit Color Scanner w/ PhotoShop 5.0 & Calibration Software
- Wacom Tablet 12X12 w/ Painter V5, Epson Color 3000 17"X22" Color Proof
- Combo Drive - JAZ, ZIP, 4GB, CD-R Dr. w/ UPS Battery Back-up & Active Terminator
- Image Solutions' Service contract, Loaner Program and Extended warranty.
- 0 Down Payment and No Payment for 90 days programs available. We work with 10 different banks. We shop the lowest leasing rate for you.

SUPERBUNDLE!

\$249
PER MONTH



MacroMedia - Director 5 - \$189 (MAC & Win.)

Authorware 3/Inte. Studio (10 / 20 Users)	\$489/\$689
Authorware 4/Inte. Studio	\$789/\$1289
BackStage / Studio	\$1529/\$2529
Dreamweaver V1/V1.2	\$149/\$199
Dreamweaver V4/ Bundle	\$199/\$269
Director5/Multimedia Studio	\$189/\$289
Director 5 (10/20) User	\$489/\$789
Director 6 / 6.5	\$499/\$589
Director Multi. Studio 6/6.5	\$689/\$849
Design In Motion Suite:	\$449
Fireworks / Shockwave	\$249/\$69
Freehand 7/Graphics Studio	\$249/\$349
Freehand 8/Graphics Studio	\$289/\$389
Fontographer V4/ Bundle	\$249/\$299
Flash V1/V2/V3	\$149/\$199/\$269
Macromedia XRes / Ex. 3D	\$69/\$69
Sound Edit 16 / DECK II	\$189/\$249

Microsoft - Office V4.2.1 - \$99(MAC & Win)

M.S. Office 4.2.1/Retail	\$169/\$249
M.S. Office 97/Professional	\$289/\$329
M.S. Office 98 / CD	\$349/\$249
Microsoft Word V5/6/98	\$99/\$199/\$269
Excel V4/V5/98	\$99/\$199/\$269
Word 98 / Excell 98	\$269/\$269
M.S. Project V3/V4	\$199/\$299
FrontPage/Encyclopedia	\$99/\$49
PowerPoint 4/ 98	\$199/\$269
M.S. Works V2/ V4	\$59/\$95
Windows 95/NT/98	\$89/\$249/\$CALL

MetaCreation - Infini-D4 - \$349 (MAC & Win.)

Bryce II/3D	\$99/\$159
F.D. Detailer / Expression	\$249/\$169
F.D. 3D STE/ RayDream 3D	\$329/\$85
Dabbler II / Art Dabbler II	\$29/\$45
Infini-D V4 / V4.5	\$349/\$459
Kai's Power Tool V2/3/SE	\$49/\$99/\$69
PainterV3/4/5	\$129/\$179/\$239
Painter 3D/ Classic	\$629/\$95
FD Poser v2/ V3	\$99/\$159
Logomotions V2.1/RayDream3D	\$85/\$95
Ray Dream Studio / V5	\$85/\$229

Corel - DRAW V8(MAC & WIN) - \$289

Corel Stock Photo/PhotoPaint	\$29/\$79
HomePage V1/V3	\$49/\$85
WordPerfect V3.51 / Pro 8(WIN)	\$79/\$99

LaserSoft - SilverFast - \$129 (MAC & Win.)

SilverFast 3 Astra 610/1200	\$129/\$189
SilverFast Agfa Studio/Arcus II	\$249/\$499
SilverFast 3 Epson 600/1200	\$129/\$289
SilverF. LinoType Jade/Saphir	\$139/\$439
SilverFast 3 Microtek E3/E6	\$129/\$189

Processor Upgrade

604E 120MHz/132MHz	\$49/\$69
604E 150MHz/180MHz	\$99/\$119
604E 200MHz/225MHz	\$149/\$169
604E 233MHz/250MHz	\$189/\$289
G3 233MHz/250MHz	\$485/\$635
G3 275MHz/300MHz	\$879/\$979

Software Specialists - MAC & Win.

Apple Mac OS 7.6/8.1	\$49/\$59/\$79
AppleShare V4/IP 5/IP 6	\$289/\$389/\$489
Apple PhotoFlash/Bundle CD	\$49/\$69
ATM Deluxe/ Type Reunion Bundle	\$49/\$69
Audiomedia III: PCI Audio I/O Card	\$689
ACTIV2.8/ AfterEffect V3.1	\$135/\$489
Bundle CD:ClarissWork,FWB, NisusW\$79	
Binuscan PhotoPerfect / Master	\$159/\$589
CD Games/Color Access	\$9/\$79
Canvas 5/ Color It	\$79/\$29
Caere OmniPage Pro. V5/V8	\$79/\$179
Caere OmniPage Direct/LE	\$39/\$29
Caere OmniForm V2/ ePaper	\$145/\$69
Clariss Works V4/V5	\$49/\$89
CyberStudio V3/ Personal Edit.	\$279/\$89
Conflict Catcher V3/V4	\$29/\$55
DOS Mounter '95/Here & Now	\$49/\$89
Dantz Retrospect 4/ Remote	\$129/\$149
DeBabelizer V3/FlashBack	\$299/\$35*
Extensis MaskPro/PowerSuite	\$269/\$169
Extensis PhotoTools/PortFolio	\$179/\$89
Extensis Intelligence/Pro Tools	\$89/\$689
Extensis QX-Effects3/Tools2	\$115/\$89
Extensis Preflight Designer/Pro	\$59/\$329
FWB H/D ToolKits PE / V2.5	\$29/\$89
FWB CD ToolKits V3	\$39/\$298/Bundle
FileMaker Pro V4/V2.1	\$149/\$79
FrameMakerV5/FrameViewer	\$389/\$69
FontFolio - Adobe V7.1/ Fonts	\$99/\$69
FlightCheck/Final EffectAP	\$359/\$139
HomePage V1/V2/V3	\$29/\$49/\$89
Language Kits/Chinese/Japanese	\$145
Language Kits/Arabic/Cyrillic	\$69/\$69
Live Picture 2.1/2.5/2.6	\$199/\$129/\$179
M.Y.O.B 7/Netscape Communi.	\$79/\$39
NetObjects Fusion/ Now Utilities	\$69/\$49
Norton Utilities V4/NisusWriter	\$85/\$49
Pantone ColorDrive/ColorWeb	\$69/\$49
Color Calibrator/ Color Chips	\$45/\$159
Survivor /Color Dr. Bundle	\$159/\$189
Pantone HexWrench/Guide	\$349/\$99
PowerPrint /Persuasion V4	\$89/\$199
PC MACLAN Win95 / Pro	\$149/\$169*
QuarkExpress V3.3.2/4/Immedia	\$689/\$629
Quicken V7/SE/Deluxe 98	\$15/\$19/\$37*
Quicken Basic/ Surf Express	\$25/\$29
QuickBooks 4 / Pro	\$119/\$179
RealPC / SpellCatcher	\$45 / \$39
SAM V4/V4.5/V5	\$29/\$45/\$65
SpeedDoubler8/ShockWave	\$39/\$49
SoftWindows 95/Try Ver.	\$179/\$39
StrataStudioPro 2.1/ V2.5	\$499/\$635
SuitCase 3 / SpringClean	\$55/\$39
StuffItDeluxeV3/V4.5	\$35/\$55
RAM Doubler II/Retrospect V3	\$339/\$89
Virex V5.8/ Virtual PC	\$49/\$45
Vector Tools/ Effect	\$89/\$99
VirusScan V3/VirtualPC	\$22/\$39
WebPainter/ Web Buddy	\$59/\$35
Web Star/ WordPerfect 3.51	\$479/\$79
Xerox TextBridge V3/Pro 8	\$29/\$39

Adobe Photoshop V3 - \$189 (Old Ver.)

Photoshop V3/V4	\$189/\$289
Illustrator V5/6/7	\$149/\$199/\$289
PageMaker V5/V6	\$189/\$249
Premiere V4/V4.2	\$189/\$289
Acrobat/StreamLineV4	\$149/\$99

Ext. H/D, DAT Tape, MO, SyQ Dr.

42MB/230MB/1GB/2GB	\$69/99/149/199
2GB 7200rpm Ext. only	\$219
Seagate 3GB Ext. only	\$229
4GB 7200rpm Ext. only	\$299
Seagate 9GB Ext. only	\$399
SONY DAT4000/5000/7000	\$69/\$79/\$89
SyJet 1.5GB Dr. w/2X cart.	\$385
SyQuest 88C/200MB Ext. Drive	\$179/299
SyQuest 105/270MB Ext. Drive	\$149/249
SyQuest EZ135/EZ230	\$109/\$145
SONY/Olympus 650MB M.O. Dr.	\$699
Panasonic 650MB M.O. \$899	
SONY 1.3GB/2.6GB M.O. Drive	\$989/\$1189
Fujitsu 230/640 MB M.O. Drive	\$299/\$389
Jaz ext. Dr. 1GB/2GB	\$189/\$489
1GB JAZ Ext. only	\$179
JAZ+CD-R Ext. only	\$489
9GB+CD-R Ext. only	\$769

Scanner: Polaroid 35LE - \$739

Epson 836/636 Expression	\$2449/\$689
LineColor JADEII/SAPHIR	\$445/\$1379
ScanMaker III / V	\$1139/\$2349
UMAX PowerLook III/300	\$CALL/\$CALL
Agfa SnapScan / DuoScan	\$185/\$3179
Nikon CoolScan / Super	\$875/\$1599

Digital Camera

Agfa e-Photo 307	\$339
Canon PowerShot 350	\$389
Epson PhotoPC 600	\$489
Kodak D-120L 2MB	\$679
Nikon CoolPix 900	\$835
Olympus D-500L 2MB	\$785
Olympus D-600L 4MB	\$989
Polaroid PDC-2000	\$1469
SONY MVC-FD5	\$689

PAINTER V5 ONLY \$149 w/ \$500 PURCHASE

Monitor & Display

15"/17" ColorMonitor	\$159/\$279 (1280X1024, 0.26)
19"/20" ColorMonitor	\$489/\$589 (1280X1024, 0.28)
Iiyama 15"/17"	\$289/\$489
Iiyama 19"/21"	\$869/\$1089
Optquest 15"/17"	\$195/\$349
Optquest 19"/21"	\$689/\$889
ViewSonic 14"/15"	\$149/\$229
ViewSonic 17"/19"	\$385/\$779
ViewSonic 20"/21"	\$899/\$979
Radii17"/21"Color	\$639/\$1579
RasterOps 17"/19"	\$489/\$885
SONY 15"/17"	\$289/\$549
SONY 19"/20"	\$989/\$1139
ATI XCL3D 4/8MB	\$179/\$239
IMS 4MB/8MB 3D	\$235/\$389
Image No. 9 4M/8MB	\$329/\$589

Disk Array - RAID

(External w/Cable, Fan, RAID S/W, Terminator)	
8GB SCSI II	\$489
8GB SCSI III F&W	\$589
12GB SCSI II	\$789
16GB SCSI II	\$889
16GB SCSI III F&W	\$1089
18GB SCSI II	\$989
18GB SCSI III F&W	\$1189
24GB SCSI II	\$1389
24GB SCSI III F&W	\$1489
36GB SCSI II	\$1589
36GB SCSI III F&W	\$1789
54GB SCSI II	\$2589
54GB SCSI III F&W	\$2789
PCI SCSI F&W Card:	
(PCI UltraSCSI Differential Up to 80MByte per secon.)	
Adaptec REMUS	\$149
Adaptec 2940UW	\$249
Adaptec 3940UW	\$489
ATTO Express PCI	\$329
FWB JackHammer	\$349
FWB RAID Tools	\$249

M.S. OFFICE 98 ONLY \$189 w/ \$1000 PURCHASE

Printers

Epson Stylus 3000\$Lowest	
Epson Stylus 1520	\$649
Epson Photo EX	\$489
Epson Photo700	\$275
Epson Stylus 600	\$239
Epson Stylus 800	\$295
Apple 4/600 Laser	\$589*
Apple 12/600Color \$2789*	
Apple 16/600PS	\$1669
Apple Laser8500	\$1969

Graphic Tablets

Calc 4X5/Painter	\$179
Wacom 4X5/Painter	\$259
Wacom 6X8/Painter	\$379
Wacom 12X12/Painter	\$549
Wacom 12X18/Painter	\$848

M.S. OFFICE V4.2.1 ONLY \$99 w/ \$500 PURCHASE

SyQuest

88/200MB	\$35/\$49
135/230	\$14/\$23
1.5GB/270	\$65/\$40

DAT Tape

60/90M	\$5/6
120M/170	\$13/77

INFINI-D V4.5 ONLY \$399 w/ \$500 PURCHASE

lomega

1.0GB Jaz	\$79
100MB Zip	\$11

M.O. Disk

128/230MB	\$6/9
650/1.3GB	\$29/38

FREEHAND 8 ONLY \$199 w/ \$1000 PURCHASE

Computers:

G3 -233MHz	\$1389
G3 -266 DT	\$1589
G3 -266 MT	\$1949
G3 - 300 DT	\$1979
8600/300MHz	\$1789
9600/200MHz	\$1249
9600/G3	\$1989
9600/400MHz	\$1679
9600/300MHz	\$2289
9600/350MHz	\$2579
7200/75MHz	\$789
7300/180MHz	\$1189
7350/180MHz	\$1989
7300/200MHz	\$1389
MAC IICX	\$369
Performa405	\$249
8150 / WGS	\$1789
9150 / WGS	\$2089
9650/350MHz	\$5289
500/WGS	\$CALL
700/WGS	\$CALL
PF405	\$249
MAC IICX	\$349
Q950/NuBus	\$689
PM 6400/200	\$889
PM 6500/250	\$1089
PM 6500/275	\$1189
PM 6500/300	\$1349
PB1400CS/166	\$1549
PB3400C/200	\$2449
PBG3/233	\$2249
PBG3/266	\$3649
PBG3/292	\$5169
PowerTowerP/1889	
PowerTowerP/G3\$2489	
UMAX S900/200	\$1189
UMAX S900/G3	\$1679

Add \$179 FOR PHOTOSHOP V3 OR ILLUSTRATOR V5.5 w/SYSTEM

macally

Mouse/CASE	\$27/\$49
Port Xpander - 3	\$55
Keyboard/w PAD\$49	\$69
Active Terminator	\$19

MAC OS 8.1 \$49 w/ \$500 PURCHASE

Ext. CD-R Dr. & Accss.

SONY 2X/6X Dr.w/Tst Pro	\$349
JVC 2X/6X Dr.w/Tst Pro	\$329
Panasonic 4X/8X Dr.w/TstPr	\$479
Mitsubishi CD-RW Dr.w/TstPr	\$479
Philips CD-RW Dr.w/Tst Pro	\$489
Ricoh CD-RW Dr.w/Tst Pro	\$549
Yamaha CD-R Dr.w/Tst Pro	\$549
Yamaha CD-RW Dr.w/Tst Pro	\$599
Toast 3/CD-COPY	\$89/\$55
CD-DA / M-Pack	\$189/\$179
CD-Label: Stomper Kits	\$55
PicassoCDCr. Printer	\$1185
74Min CD-Disk	\$1.79/ea.

Memory

	30 pin	72 pin	168 pin
4MB	\$25	\$19	-
8MB	\$29	\$27	\$27
16MB	\$35	\$35	\$35
32MB	-	\$59	\$59
64MB	-	-	\$99
128MB	G3	-	\$199

DIRECTOR 5 ONLY \$99 w/ \$1000 PURCHASE

DIRECTOR 6.5 \$539 w/ \$500 PURCHASE

800-352-3410

385 Van Ness Ave. #110 • Torrance, CA 90501 Email: imagesol@earthlink.net

Prices subject to change without notice. Not responsible for typographical errors. 24 hour replacement limited to products in stock.

Fax: 310-782-5974
<http://www.imagesolution.com>

Image
Solutions



Sales: 818-787-3509

6735 Van Nuys Blvd Van Nuys, CA 91405

e-mail: csales@pacifinet.net



* = Factory Refurbished



PowerMacs

iMac G3/233 32/4GB, 24xCD, 15" AV	\$1255
G3/333 Tower 128/9GB U-W, 24xCD	\$2695
G3/300 Tower 128/9GB U-W, 24xCD, Zip	\$2595
G3/300 Tower 64/4GB, 24xCD, Zip	\$2095
G3/300 Desktop DVD 64/8GB, Zip	\$1795
G3/266 Desktop 64/4GB, 24xCD, Zip	\$1595
G3/266 Desktop 64/4GB, 24xCD	\$1465
G3/233 DT. 64/4GB, 24xCD, Kb.	\$1225
8600/300 64/4GB, 24xCD, Kb.*	\$1495
6500/225 64/2GB, 12xCD, Kb.*	\$695
4400/200 64/2GB, 12xCD, 256K Cache	\$695
4400/200DOS 64/2GB, 12xCD, 256K Cache	\$795

DOS Card PC166MHz-----\$295
16MB RAM, 2MB Video, DOS 6.22, Win.95

Digital Cameras

Agfa ePhoto 307	\$209
Agfa ePhoto 1280	\$579
Kodak DC 210	\$545
Olympus D600-L	\$849
SONY Movica FD5-1	\$449
SONY Movica FD7-1	\$629

SCANNERS

AGFA DuoScan T1200x	CALL
AGFA DuoScan	\$2299
Hewlett Packard 6100C	\$695
Polaroid Sprintscan 35Plus	\$1349
Umax Astra 1220S 8.5 x 11	\$189
Umax Astra 2400S 8.5 x 14	\$469
Umax PowerLook II w/Trans.	\$1159



Faster Macs... Hot Deals

www.appledeals.com

SOFTWARE

Adobe Photoshop 5.0 / Illustrator 7.0	\$499/389
PageMaker 6.5 / Acrobat 3.0.1	\$379/159
PageMILL 3.0 / StreamLine 4.0	\$89/129
Dimension 3.0 / Premiere 4.2	\$129/279
Premiere 4.2 / After Effects 3.1	\$289/399
After Effects Prdctn. Bndl.	\$1499

Quark QuarkXpress 4.0\$687

Painter 5.0	\$229
Painter 3D	\$459
Expression	\$189
Bryce 3D	\$159
Kai's PowerTools 3.0	\$95

Office 98 MAC	\$349
Excel 98 MAC	\$179
Word 98 MAC	\$159

Memory

32/64MB DIMM	\$39/75
128/256MB DIMM	\$165/380
64MB PowerBook Wall Street	\$99
128MB PowerBook Wall Street	\$175

www.appledeals.com

Toll Free 1-800-816-7307

Fax: 818-787-5555

Visit Our Site for Daily Specials

Apple, MAC, iMac, PowerMac, & PowerBook, are registered trademarks of Apple Computers Inc.

All prices are subject to prior sale & subject to change without notice!

PowerBooks

G3/300 DVD 64/8GB, DVD, 56K, 14.1"	\$4695
G3/292 64/8GB, 20xCD, 56K	\$3695
G3/250 64/4GB, 20xCD, 56K	\$2695
G3/233 64/2GB, 20xCD, 56K, 14.1" TFT	\$2345
G3/233 64/2GB, 20xCD, 14.1" TFT	\$2095
G3/233 64/2GB, CD, 12.1" DSTN	\$1795
3400c/240 64/3GB, CD, 10BT, 33.6	\$1795
3400c/200 64/2GB, CD, 10BT, 33.6	\$1595
1400c/133 32/1GB, CD*	\$1075
1400cs/133 32/1.3GB, 8xCD	\$895
5300cs/100* 32/750MB, free extra Batt.	\$775*
Duo 2300c 40/2.1GB, w/1x Floppy/Adptr.	\$1095*
Duo Floppy / Adapter	\$175
Battery f/PB. 5300 Series	\$39

Video & Graphic Cards/CD-R Drives

Panasonic 4x8 CD-R	\$289
Yamaha 2x4x6	\$389
IO Pack Blank CDR Media	\$12

Twin Turbo 128M4/128M8	\$239/329
ix 3D Ultimate Rez	\$435
ix 3D Pro Rez	\$249

www.PowerBook1.com

Secure Online Ordering!

Your Source for all PowerBook Upgrades and Accessories

newer tech

NUpowr 1400/G3 250MHz	\$ 979
NUpowr 1400/G3 216MHz	\$ 689
NUpowr 2400/G3 240MHz	\$ 829
VIEWpowr 1400 (16-bit video)	\$ 239
Bookendz Dock for 34/24/1400	\$ 179

MCE powrUP 1400/G3 Bundle:
Includes: NUpowr 1400/G3 250MHz/1MB cache & IBM 4.0 GB 2.5" IDE HD \$ 1329

Introducing The "Flip Disk"
High capacity, portable storage for your PowerBook... Just plug it in & it works!

Flip Disk
2.1GB \$449
4.0GB \$599
6.0GB \$799

YSL ZIP PowerBook Drives
PB 1400 \$ 219
PB 3400, G3, 5300, 190 \$ 239
NEW G3 Series \$ 249

SCSI PowerBook Drives
For use in PB 520-540c Series, Duo 200 Series, PB140-180c (except 150)
540 MB TOSHIBA \$ 259 2yr

IX MICRO Road Rocket
24bit Video Output for PB G3 series
ONLY \$299

PowerBook Drives
For use in PB 3400, 2400, 1400, 5300, 190, 150 & Duo 2300

2.1 GB TOSHIBA	\$ 199	3yr
3.2 GB HITACHI	\$ 249	3yr
4.3 GB IBM	\$ 339	3yr
5.4 GB IBM	\$ 399	3yr
6.4 GB IBM	\$ 499	3yr
8.1 GB IBM	\$ 789	3yr

Use our PC-card case for your original IDE drive and save your megabytes
ONLY \$129

All MCE PowerBook hard drives include the **PowerBook** manual, torx tool, mounting bracket*, driver software* and anti-static wrist strap.
*as needed

30 Hughes Suite 203 • Irvine, CA • 92618
Visa / MC / AmEx / Discover / P.O.'s

1-800-5000-MAC • 714-458-0800 • fax 714-458-1803



PowerMacs

iMAC \$1145

G3/233, 32, 4GB, 24xCD,
15" AV Display

G3/333 Minitower	128/9GB UW, 24xCD	\$2695
G3/300AV Mntwr.	128/8GB UW, CD, Zip	\$2795
G3/300 Minitower	64/8GB, 24xCD, Zip	\$2095
G3/300 Desktop	64/6GB, 24xCD, Zip	\$1795
G3/300 Desktop	32/4GB, DVD/Video	\$1795
G3/266 Desktop	32/4GB, 24xCD	\$1499
G3/233 Desktop	32/4GB, 24xCD, Kb.	\$1235
9600/200MP, 9600/300 & 9600/350		CALL
8600/200	64-2GB, 12xCD, Zip	\$1275
4400/200DOS	32/2GB, 12xCD, 256K	\$775



Visit Our Sites or
Call Us for Full List of
Products & Parts
on PC Systems

TOSHIBA

www.toshibadeals.com

IBM

www.ibmdeals.com

COMPAQ

www.compaqdeals.com



PowerBooks

G3/300 \$2699

64/8GB, DVD/Video, 56K Fax, 14.1

G3/292	64/8GB, 20xCD, 56K	\$4295
G3/266	64-4GB, CD, 56K, 14.1" TFT	\$2995
G3/250	64-4GB, CD, 56K, 13.3" TFT	\$2395
G3/233	64-2GB, CD, 56K, 14.1" TFT	\$2395
G3/233	64-2GB, CD, 14.1" TFT	\$2095
G3/233	64-2GB, CD, 12.1" DSTN	\$1795
3400C/240 & 3400C/200		\$1795/1585
1400CS/166	64-2GB, CD	\$1095
1400C/133	32-1GB, CD	\$1095
5300CS/100	32-750MB, W/Extra Battery	\$685
DUO 2300C/100	16-1.1GB	\$775
Floppy + Adap. F/Duo		\$165

Apple Displays & Printers

1705 17"	\$385	LaserWriter 16/600PS	\$995*
1710* 17"	\$399*	LaserWriter 16/600PS	\$1195
ColorSync 20"	\$1449	LaserWriter 12/640PS	\$995
850AV 20"	\$1085	LaserWriter 4/600PS	\$555

WACOM

All ArtZ Tablets Include Pentools.
All Intuos Tablets Include Painter Classic.

Intuos 4x5/6x8/9x12/12x12	\$159/289/399
Intuos 12x18	\$699
ArtPad 4x5/ ArtZ 6x8/6x8*	\$99/249/189
ArtZ 12x12/12x12*/12x18*	\$349/289/385
ArtZ 12x18 Electrostatic*	\$439

Trade-in Your Old Mac
for a **New One!**
Call for an estimate.
(818)609-0466



UNIVERSAL
Computers, Inc.

Van Nuys, CA, USA

Apple, iMac, iMac, PowerMac, PowerBOOK, are registered trademarks of Apple Computers, Inc.

Prices are based on C.O.D. Order & subject to prior sales & change!

www.computerstogo.com

e-mail: usales@universalcomputers.com



MWAd#
1298

* Factory refurbished with Warranty

Sales: 1-800-621-1963

Sales: (818) 786-8150

FAX: (818) 787-2111

Printers

**HEWLETT*
PACKARD**

8000N / 5000N	1200dpi, 11x17"	\$2545 / 1939
4000N/TN	17ppm	\$1335/1459
4000N*/ 4000TN*		\$1199 / 1299
5M/ 5M*/ 6MP*		\$1265/ 1195 / 685
DeskJet 1600CM/ 1600CM*		\$1175/ 995
4MV/4MV*/5SIMX		\$1495/1295/2795

6MP 8ppm, 3MB, 600DPI, PSL2 \$745

XEROX DocuPrint Laser Printers CALL



1-800-533-9005

Fax Bids: (310) 475-7744 or email us at compamer@artnet.net
10435 Santa Monica Blvd., Los Angeles, CA 90025

Check out our Web!

WWW.COMPU-AMERICA.COM

We are open Mon-Sat, 9am-6pm

Government, University and
Fortune 1000 P.O.'s are welcome!
Business Leasing is Available!
International Orders Please call
tel: (310) 446-1771

POWERMACS!

Starting at	\$799
-------------	-------

G3/333MT	128/2-4GB/24X	2679
G3/300MT	64/8GB/24X/CD/ZIP	2099
G3/300DT	64/8GB/CD/ZIP	1799
G3/266MT	128/4GB/24X/ZIP/16V	1899*
G3/266MT	32/6GB/24X/ZIP	1699*
G3/266DT	32/4GB/24X	1349
G3/233MT	32/4GB/24X/CD/ZIP	1499
G3/233DT	32/4GB/24X/CD	1249
9600/350	64/4GB/24X/CD/ZIP	CALL
9600/300	64/4GB/24X/CD	CALL
9600/200MP	32/4GB/CD	CALL
9600/200	32/4GB/CD	CALL
8600/300	32/4GB/24X/CD/ZIP	1199*
8600/250	32/4GB/24X/CD/ZIP	1099*
8600/200	32/2GB/12XCD/ZIP	999*
7300/200	32/4GB/CD	899*
6500/300	32/4GB/CD/FAX	999*
6500/250	32/4GB/CD/FAX	899*
5500/225	32/2GB/CD/15" MONITOR	899*
4400/200	32/2GB/CD/DOS CARD	899

PERFORMAS

6400/200V	16/2-4GB/CD/MD	CALL
6400/200	16/2-4GB/CD/MD	CALL
6400/180	16/1GB/CD/MD	CALL
6360/160	16/1GB/CD/MD	CALL

WORKGROUP SERVERS

Starting at	\$2299
-------------	--------

G3/233	64/4GB/CD/MD/SHA	CALL
G3/266	128/2-4GB/CD/MD/SHA	3199
G3/300	128/2-8GB/CD/MD/SHA	3499
9650/350	64/4GB/CD	2499
9650/233	64/4GB/CD/SHARE/DAT	2299

POWERBOOKS

Starting at	\$699
-------------	-------

3400C/240	16/3GB/CD/MD	1699*
3400C/200	16/2GB/CD/MD	1499*
3400C/180	16/1GB/CD/MD	1199*
2400C/180	16/2GB/CD	1099*
1400C/166	16/2GB/CD	1399*
1400C/133	16/1GB/CD	1299*
1400C/117	12/750	999*
5300CS/100	16/750	699*

NEW G3 POWERBOOK!

Starting at	\$1599
-------------	--------

G3/233	32/2GB/20X/12.1STN	1599
G3/233	32/2GB/20X/12.1STN/56K	1699
G3/233	32/2GB/20X/12.1TFT/56K	1899
G3/233	32/2GB/20X/13.1TFT	2099
G3/233	32/2GB/20X/14.1TFT	2199
G3/250	32/4GB/20X/13.1TFT/56K	2899
G3/266	64/4GB/20X/14.1TFT/56K	3099
G3/292	64/8GB/20X/14.1TFT/56K	3999
G3/300	64/8GB/DVD/14.1TFT/56K	4699

SONY

Starting at	\$269
-------------	-------

Sony 205EII		999
Sony W900		CALL
Sony 100ES/100GS		269/279
Sony 200ES/200GS/200PS		429/529/699
Sony 400PS 19"		779
Sony 300SF 20"		999
Sony 500PS 21"		1199

ViewSonic*

Starting at	\$139
-------------	-------

G41 14"	139
C51/Q53 15"	159/169
Q71/Q100	249/599
E641/E655	139/199
V73/V75 17"	319/379
V95/V115	499/849
C71/V773	329/379
G1775/G790	479/499
P775/P777/P771	499/549/549
G810/P810	899/999
FT813/P815	1099/1099
Z9GA	1649
VIEWSONIC WVPAN VPA138	789
VIEWSONIC WVPAN VPA 145	799
VIEWSONIC WVPAN VPA 150	1029
PROJECTOR 800	CALL

RASTEROPS

Superscan MC-6215	379
Superscan MC-6315	449
Superscan MC-7515	649
Superscan MC-20"	899
Superscan MC-801/801HR	949/1199

EPSON

Starting at	\$139
-------------	-------

STYLUS COLOR 700/850	229/325
STYLUS COLOR 600/800	139*/220
STYLUS COLOR Photo-EX	449
STYLUS PRO-XL	299*
STYLUS COLOR 1520/3000	449/1199
EXPRESSION/636/EXEC	529
EXPRESSION/636/ART	699
EXPRESSION/636/PRO	979
5000N	CALL
4000N/4000TN	1299/1399
6MP	799
4MV	CALL

UMAX*

Starting at	\$99
-------------	------

VISTA Astra 6105-Photo Deluxe	99
VISTA Astra 1200/1220	249/159
VISTA Astra POWERLOOK/III	929/CALL
VISTA Astra POWERLOOK 3000	CALL
Mirage HSE w/Trans	2299

WACOM

Starting at	\$269
-------------	-------

ARTIZ II 6 X 8	269
ARTIZ II 12 X 12	379
ARTIZ II 6 X 8 W/PAINTER	549
ARTIZ II 12 X 18	629

iomaga

Starting at	\$79
-------------	------

ZIP DRIVE 100 MB	110
ZIP DRIVE PLUS	129
ZIP CART 10 PACK	89
JAZZ DRIVE 2 GIG	349
JAZZ DRIVE 1 GIG	229
JAZZ CART	79
IONEMA BUZ	189

GLOBAL VILLAGE

Global Village Plat 56K EXT	129
Global Village Gold II PCM 14.4	49
Global Village Gold II 14.4EXT	49
Global Village 56.6 PCMCIA	159
Global Village 56.6 ETH/PCM	189

YOUR #1 COMPUTER SUPERSTORE!



All prices are cash discounted. ** denotes a refurbished product. Not responsible for typos. Apple, the Apple logo, Mac OS logo, Macintosh, MessagePad, Newton, OpenDoc, PowerMacintosh, PowerBook, QuickTake, QuickTime, QuickTime logo and StyleWriter are trademarks of Apple Computer, Inc., registered in the U.S. and other countries. All other names & logos are trademarks by their respective owners. We are Not Apple Authorized.

Save On Reconditioned Macs & Peripherals From DataTech

HOLIDAY SPECIALS

Apple DuoDock
only...\$89

LaserWriter Int...\$179

OLDER MACS

Mac LC 4/40	\$69
Mac Ili 5/40	\$69
Mac Ili 8/80	\$99
Mac Ili x 8/80	\$129
CENTRIS/QUADRAS	
Centris 610 8/230	\$169
Centris 650 8/230	\$199
Quadra 610 8/230	\$199
Quadra 650 8/230	\$249

Quadra 800 8/230	\$279
POWERMACS	
6100/60 8/230/CD	\$399
7100/80 24/700/CD	\$499
8100/100av 16/1GB/CD	\$599
7500/100 24/1GB/CD	\$699
8500/120 32/2GB/CD	\$799
9500/132 32/2GB/CD	\$899
MONITORS	
Apple 14" Color Plus	\$129
Apple 14" Trinitron	\$169

Apple 14" Multiscan	\$199
Apple 15" Multiscan	\$229
Apple 17" Multiscan	\$299
PRINTERS	
LaserWriter Intx	\$229
LaserWriter IIf	\$299
HP 4mv (11x17)	\$1099

- All CPUs include mouse.
- 6-month warranty on all merchandise.

TO ORDER CALL
1-800-281-3661

VISA & MasterCard accepted

DataTech
REMARKETING, INC.

Tel: 615-860-4422
Fax-On-Demand: 615-860-0109
Fax: 615-860-0390
Web: www.datatech-rmkt.com

D-1298

www.datamicro.com

1-800-345-1234

PowerMacs

Discount Prices

PowerBooks

e-mail: datamicro@earthlink.com

Displays / Printers / Scanners

G3/333 128/9GB/24xCD	\$2785
G3/300MT 128/2x4GB/24xCD	\$3250
G3/300DT 64/6GB/24xCD/Zip	\$1845
G3/266DT 32/4GB/24xCD/Zip	\$1585
G3/233MT 32/4GB/24xCD	\$1550
G3/233DT 32/4GB/24xCD/Zip	\$1285
8600/200 32/2GB/12xCD/Zip	\$1099*
7300/200 32/4GB/CD	\$985*
6500/300 32/4GB/CD/FAX	\$985*

G3/300 64/8GB/DVD/56K/14.1"	\$4585
G3/292 and G3/266	CALL
G3/233 32/2GB/20xCD	\$1850
3400C/240 16/3GB/CD/Modem	\$1800
3400C/200 16/2GB/CD/Modem	\$1600
3400C/180 16/1.3GB/CD/Modem	\$1400
1400C/166 16/2GB/CD	\$1395*
Duo 2300c 8/750MB	\$895*
5300c and CS 8/750MB/CD	\$825*/725*

Apple 15"AV/1705/750 Color Monitors	\$345/395/485
ViewSonic 17"G771/GT775 Color Monitors	\$349/545
Sony 17" 200ES/20"SE2T Color Monitors	\$465/1195
Apple LaserWriter 8500* Printer	\$1395*
Apple LaserWriter 16/600* & 12/640* Printers	\$995*/895*
EPSON Stylus 3000 Color Printer	\$1645
EPSON Stylus ProXL 11"x17"/800/Photo EX	\$325/265/490
Hewlett Packard 4000N/4000TN 1200dpi, Eth.	\$850/1295
Agfa Arcus II Trnsprncy/Studio Scan II Clr. Scanners	\$1690/725

International: (310) 398-3300

Fax: (310) 391-2488

Apple, PowerMac, PowerBook, & LaserWriter are registered trademarks of Apple Computers, Inc.
*Reflects Factory Refurbished Units. Schools & Gov. Agencies P. O.'s accepted.

MacWorks 800-482-2705

e-mail: sales@macworks.com
Voice 913.599.6227 • Fax 913.599.6111 • 9am-6pm Mon-Fri CST
Prices Subject to Change • Visa/MasterCard/AmEx
We only ship FedEx • 15% minimum restocking fee on all returns

PowerMac Bundles

PowerMac 7500/132	16/500/CD
Apple 15" MultiScan	ADB Keyboard/Mouse
Apple GeoPort Adapter	
ONLY \$899⁹⁹	
PowerMac 7100/80 16/500/CD	Apple 13" Hi-Res RGB
ADB Keyboard/Mouse	Apple GeoPort Adapter
ONLY \$599⁹⁹	

Used Desktop Macs

PowerMac 7600/120	\$799 ⁹⁹
PowerMac 7200/90	\$549 ⁹⁹
Quadra 650 24/230/CD	\$349 ⁹⁹
Quadra 840av 16/250/CD	\$299 ⁹⁹
Quadra 630 8/160/CD	\$299 ⁹⁹
Quadra 610 8/230/CD	\$299 ⁹⁹
Quadra 605 12/160	\$249 ⁹⁹

Apple CD-ROM Drives

Apple 3600i (24x)	\$189 ⁹⁹
Apple 3000+ (2x)	\$49 ⁹⁹
• External Case, Cable, Terminator & Software only \$50 more	
• Internal Mounting Kit only \$25	
Apple GeoPort Adapter I	\$19 ⁹⁹

Apple Video Upgrades

Apple Video System	\$29 ⁹⁹
Apple TV/Video System	\$49 ⁹⁹
Apple MPEG Media System	\$20 ⁹⁹
*with video system purchase	

Apple Processor Cards

604/604e cards for PM 7300-9600	
Apple 604/132	\$19 ⁹⁹
Daystar 604e/200	\$149 ⁹⁹
Apple 604e/200MP	\$399 ⁹⁹
Apple 61xx DOS	\$29 ⁹⁹

Apple StyleWriters

Color SW 2500	\$179 ⁹⁹
Color SW 1500	\$149 ⁹⁹
StyleWriter 1200	\$129 ⁹⁹

FROM \$29⁹⁹ www.macworks.com

voice: 925-689-9488 fax: 925-689-9487

PRICES & QUANTITIES SUBJECT TO CHANGE

Place Your Orders OnLine!

1-888-447-3728 • MacResQ • www.macresq.com

Toll Free Fenton

UPS Systems

PowerPal	
280VA	\$99
425VA	\$149
660VA	\$189
1000VA	\$369
1400VA	\$479

PARTS, PARTS, PARTS!!

CyberDrive 24x internal CD Rom	\$99
Toshiba 32x internal CD Rom	\$119
Manual inject floppies (661-0121)exch	\$59
Auto inject floppies (661-0474)exch	\$49
PB 100 & 500 series floppies-exch	\$89
PM 6100 DOS cards	\$39
Apple CS II Slot 28.8 modem	\$29
HARD DRIVES: 3.5" / Internal / SCSI	
160 mb \$49	500 mb \$79
250 mb \$59	700 mb \$89
1.2 Gig	\$109
2 Gig	\$179

APPLE MONITORS

14" Basic Color VGA	\$99
14" Performa Plus	\$129
14" Multi-scan	\$149
15" Multi-scan	\$199
16" RGB Display	\$229
17" Multi-scan	\$299
1705 Display	\$349
1710 Display	\$399
20" Multi-scan	\$799
21" Color Display	\$499

PowerBook Screen EXCHANGE

PB 140/145/160/165/165c/520/540	\$199
PB 5300cs/190cs/180c	\$249
PB 5300ce/270c/280c/2300c	\$299
SAME MODEL EXCHANGE- NOT AN UPGRADE	
+ \$65 for installation	
+ \$100 for a CRACKED screen	

POWER SUPPLIES (EXCH. ONLY)

LC thru Q 605	\$19
Mac II cx/ci / Q 700	\$49
Q 800 / PM 8100	\$99
PERF. 630 thru 6200	\$69
PERF. 6360	\$89
Duo Dock	\$49
Q 900 / 950	\$99
PM 7100	\$69
PM 6100	\$89
II SI	\$29



CD 300i+ (2x)	\$39-R
CD 600i (4x)	\$79-N / \$59-R

Internal APPLE CD Rom Drives*
*Internal Mounting kit: \$25 *External Model: \$60 (face plate, audio cable, sled) (installed w/ cables)

CD 1200i (8x)	\$99-N
CD 1800i (12x)	\$149-N

CD 3600i (24x)	\$179-N / \$169-R
----------------	-------------------

Apple
StyleWriter
1200's
\$119
MR
Mac-Res-Q

15% re-stocking fee-ALL ITEMS REFURBISHED UNLESS NOTED AS NEW • All Parts Sold With a 90 Day MacResQ Exchange Warranty • Exch. Required For ALL Power Supplies • All Major Credit Cards With NO Surcharge •

Choose 403 at www.macworld.com/GetInfo

RAM

16MB/32MB 72-pin SDRAM	19/39
32MB/64MB 168-pin Dimm 60ns/49/69	
128MB/168-pin Dimm 60ns	199
32MB/168-pin Dimm SDRAM G3	49
64MB/168-pin Dimm SDRAM G3	89
128MB/168-pin Dimm SDRAM G3	149
32MB/168-pin Dimm 60NS 3.3V	49
64MB/168-pin Dimm 60NS 3.3V	99
32MB/64MB PB G3 Series	79/129
128MB PB G3 Series	229
16MB/32MB PB 3400c Module	55/99
64MB PB 3400c Module	99
128MB PB 3400c Module	199
24MB/32MB PB 1400	79/89
26MB/32MB PB 2400	99/145
64MB PB 2400	259
8MB/10MB PB 165/180	175/199
24MB/34MB PB 5300	79/99
48MB PB 5300	139
16MB/24MB PB 500	59/79
32MB PB 500	99



(800) 801-4MAC



HARD DRIVES

Quantum IDE DRIVE	
Stratus SE 6.4GB 10ms	179
Stratus SE 8.4GB 10ms	279
Quantum SCSI DRIVE	
Stratus SE 3.2 9.5ms	239
Viking 4.5 8ms/7200	255
Atlas II 9GB 8ms/7200	399
Atlas III 9GB 7.5ms/7200	639
Atlas III 12.8GB 7.5ms/721099	1149
Seagate	
Bar 4.5GB 7.8ms/7200	499
Bar 9GB 8ms/7200	679
Medalist 9.1GB, 9ms/7200	499
Cheetah 18GB 6.7ms/10000	1149
23GB 13ms/5600	1499
6.5GB 9ms/7200	399
JAZ 1GB EXT.	259
JAZ 2GB EXT.	349
ZIP External	129

PRINTERS

Epson Stylus Color Photo EX	449
Epson Stylus Color Photo 800	219
Epson Stylus Color 850	339
Epson Stylus Color 800N	489
Epson 1520	719
Epson 3000	1599
HP DeskJet 1600CM	1899
HP LaserJet 6MP	899
HP LaserJet 4M 16ppm	1499
HP Color LaserJet 5M	4799
Newgen Design NXP Tabloid	1799
GCC Elite 12/600 Dpi	999
GCC Elite XL 1208/1200Dpi	2399

VIDEO CARDS

Radius EditDV/FireWire	\$699
TrueVision Targa 1000	1399
ATI XClaim VR 4MB	229
IXMICRO PROREZ 8MB	269

MONITORS

Hitachi 17" 22mm	499
Hitachi Superscan 22 21"	1099
KDS 21" 28	699
Radius PressView 21SR	2299
Radius PrecView 28 21"	1299
MicroOutlet 19" 26	469
MicroOutlet 17" 26 w/speakers	299
NEC Multisync M700 17"	539
Iiyama PRO17.25	489
Iiyama 502 21" 27	969
ViewSonic E641 14" 28	159
ViewSonic E771 17" 27	339
ViewSonic PT813 21" 28	1099
ViewSonic PS790 19" 25	599
Sony Multisync 500PS 21" 26	1299
Sony Multisync 400PS 19" 25	799
Sony Multisync 200ES 17"	449
Sony Multisync 200GS 17" 25	549
Sony Multisync 100SF 15" 25	250

SCANNERS

Umax Astra 1220s 600 dpi	\$169
Umax 1200s, Full Photoshop399	
Umax Astra 610S 30-bit	109
AGFA Arcus II Bundle	\$1099
AGFA SnapScan 600 Artline	419
AGFA SnapScan 1236s	235
Microtek Scanmaker V600	115
Microtek Scanmaker V310	69
Microtek Scanmaker5 Ph/Tran2199	

MODEMS

Supra Express 56k V90	109
Supra 56k, PCMCIA Pbook	149
Zoom 33.6 EXT.	79
G.V. Teleprt 56k V90	155

MacBYTE

SERVING MAC USERS SINCE 1987

GREAT DEALS ON REFURBISHED MACS NOW!

BUY • SELL • TRADE

CASH FOR MACS

NEW & USED MACS

WITH WARRANTIES

Local Area-On-Site Consulting

800-432-2983

12910 Culver Blvd., Suite H

Los Angeles, CA 90066

FAX: 310-448-4494

Choose 404 at www.macworld.com/GetInfo

MEMORY

"Computer Show" Prices Everyday!

Mohawk Memory Co., Inc.

SIMMS • DIMMS • EDO • ECC •

VRAM • CACHE • PRINTER •

SDRAM • POWERBOOK

Fax: (978) 897-0009

Email: simdim@mohawkmem.com

Webstore: www.mohawkmem.com

16A Waltham St. Maynard MA 01754

Visa MC Discover AMEX PO's O.A.C.

1(800) 986-6429

Good Old-Fashioned New England Service

USED MACS & POWERBOOKS FOR SALE WANTED

7200/90	8/500/CD	\$ 600
6400/180	16/2gb/8x/28.8	600
7100/66	8/500/CD	525
6100/60	8/230	350
PwrBook 3400c/180	16/1gb/8x/CD	1,375
PwrBook 1400c/117	16/750/6x/CD	1,150
PwrBook 540c	12/230/mdm	600
PwrBook170	8/80	400

Prices subject to change. Limited to stock on hand, subject to prior sale. Call for up-to-the minute inventory & prices.

11933 Wilshire Bl., W. Los Angeles, CA 90025

(800)873-3726



www.macsolutions.com

(800)80-WE-BUY

MediaGuide

BUY/SELL/TRADE Prices Listed Reflect a 3% Cash Discount

OLDER MACS		POWERBOOKS		MISCELLANEOUS	
Mac Plus 4/40.....\$49	SE 4/20 (800k).....\$49	PB 140 4/40.....\$199	PB 170 8/80.....\$249	New Sony 24x external CD-ROM.....\$169	
SE FDHD 4/40.....\$89	Classic 4/40.....\$89	Powerbook 160 8/80/14.4.....\$399	Powerbook 165 12/120/14.4.....\$449	Apple 2x tray-loaded CD-ROM (int).....\$49	
SE/30 8/80.....\$129	Classic II 4/40.....\$119	Powerbook 165c 12/120/14.4.....\$499	Powerbook 180 8/120/14.4.....\$499	Apple 730mb 2.5" Powerbook SCSI HD.....\$249	
Mac II 4/40/Video.....\$39	LC 10/40.....\$79	Powerbook 180c 14/160/14.4.....\$599	Powerbook Duo 230 12/160/14.4.....\$199	New external HD case w/cable.....\$49	
Ilcx 8/40/Video.....\$79	Ilci 5/80.....\$79	Powerbook Duo 270c 12/240/14.4.....\$399	Powerbook 520 12/240/19.2.....\$529	256K L2 cache for 6100/7100.....\$9	
LC II 10/80.....\$89	LC III 8/80.....\$109	Powerbook 520c 12/240/19.2.....\$599	Powerbook 540c 12/320/19.2.....\$699	6100 486/66 DOS card (w/cable & sw).....\$49	
Ilci 8/80.....\$99	Ilx 8/80/Video.....\$79	Powerbook 1400's & 3400's.....BEST PRICES!		Squest Cartridges 44/88/200.....\$9/\$19/\$49	
Ilvx 8/160.....\$119	Ilfx 8/160.....\$129			Ilisi NuBus adaptor w/FPU.....\$29	

QUADRA & CENTRIS		POWER MACS		MONITORS	
Perf 475 8/230.....\$189	C610 16/500.....\$179	6100/60 8/500/CD/DOS.....\$499		Apple 12" Mono.....\$79	Apple 12" RGB.....\$99
G605 8/230.....\$199	Q610 16/500.....\$199	7100/66 8/500/CD.....\$459		Apple 13" RGB.....\$149	Apple 14".....\$179
Q630 8/250.....\$249	C650 16/500.....\$299	7100/80 8/500/CD.....\$499		Apple 15" MS.....\$249	Apple 16" RGB.....\$279
Q650 16/500.....\$349	Q700 20/500.....\$299	8100/80 8/500/CD.....\$549		Apple 17" MS.....\$349	Third Party.....\$CALL
Q800 16/500.....\$379	Q900 20/500.....\$399	7200/75 8/500/CD.....\$499			
Quadra 660AV 16/500/CD.....\$399		7200/90 8/500/CD.....\$549			
Quadra 840AV 16/500/CD.....\$499		7500/100 16/1gig/CD.....\$699			
		8500/120 16/2gig/CD.....\$799			

POWER MACS		PRINTERS		BUNDLE SPECIALS	
6100/60 8/500/CD/DOS.....\$499		Imagewriter II.....\$99	Laserwriter.....\$99	(Listed CPU plus an Apple 13" RGB, KB, mouse)	
7100/66 8/500/CD.....\$459		Laserwriter IIInt.....\$199	LW IIInt.....\$249	Ilci 8/80.....\$199	Ilisi 9/80.....\$199
7100/80 8/500/CD.....\$499		Laserwriter IIInt.....\$299	LW IIInt.....\$399	Ilcx 8/80.....\$179	Ilvx 8/80.....\$229
8100/80 8/500/CD.....\$549		LW Pro 630.....\$699	LW 16/600.....\$899	Centris 610 8/730.....\$299	
7200/75 8/500/CD.....\$499		Laserwriter Pro 810.....\$999		Quadra 630 20/2gig.....\$349	
7200/90 8/500/CD.....\$549		Super Match Dye Sub printer.....\$499		Quadra 650 16/730.....\$429	
7500/100 16/1gig/CD.....\$699		HP Deskjet 1600c (new).....\$999			
8500/120 16/2gig/CD.....\$799		HP Deskwriter (no ink).....\$79			

Toll free: (888) 466-2271

Fax: (303) 571-5020 • Local & Int'l: (303) 571-1900 • Hours: M-F 8-6, SAT 10-5 MST • 777 N. Santa Fe Dr., Denver, CO 80204
Sales E-mail: Sales@MediaGuide.com • Purchasing E-mail: Purchasing@MediaGuide.com • http://www.mediaguide.com

THE ULTIMATE UPGRADE!

G3

SONNET™
SIMPLY FAST™

**3 Year Warranty!
Free Technical
Support!**

Macworld
EDITORS'
CHOICE

Mac
ADJUST
RATED
★★★★★
RELIABLY AWESOME!

MacReviews
★★★★★
MacHome

MacDirectory
Best Buy
Crescendo G3
★★★★★
MacWEEK Review

Award-Winning Crescendo G3 Processor Upgrades!

**Fastest G3 Available for Your 6100/7100/8100
Power Mac!**

Installing a Sonnet™ Crescendo™ G3 processor upgrade card into the PDS slot of your Power Mac is "plug-and-play" and will match the performance of a new G3 system.

- Universal card – works in 6100, 7100, and 8100
- 100% software compatible
- 665-920% overall speed improvement
- Use existing video card in 71/8100 with Adapter Kit or 71/8100 NuBus video card – millions of colors up to 1152x870

266 MHz!

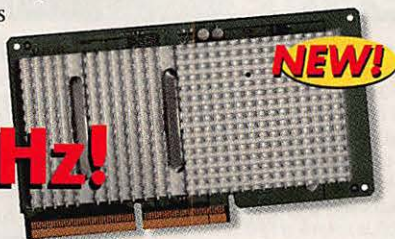


**G3 Speed Up To 366 MHz for Your
PCI Power Mac!**

In minutes, remove your old CPU card and replace it with a Sonnet G3 processor upgrade card.

- 100% software compatible
- 400-640% overall speed improvement
- Consistently best values
- Plug-and-play installation

366 MHz!



Presto 040 Processor Upgrades for 68030 Macs

Increase the performance of your Mac up to 550% with this super-fast 68040 upgrade card and run Mac OS 8.1! The Presto includes 128K level 2 cache and can be configured with an FPU for fast math calculations.

Level 2 Cache Cards

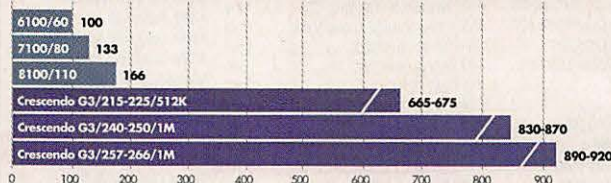
Adding a cache card is the most cost-effective way to increase the your Power Mac speed up to 200%. A level 2 cache card provides more information to the CPU every bus cycle.

**PowerMac 6100/7100/8100/8115 • Wrkgrp Svr 6150/8150/9150
Performa 6100-6118 • Radius 81/110**

Crescendo G3 220 MHz/512K Cache (except 6100AV)	\$499 ⁹⁵
Crescendo G3 220 MHz/512K Cache (6100AV only)	\$499 ⁹⁵
Crescendo G3 250 MHz/1MB Cache (except 6100AV)	\$599 ⁹⁵
Crescendo G3 266 MHz/1MB Cache (except 6100)	\$699 ⁹⁵

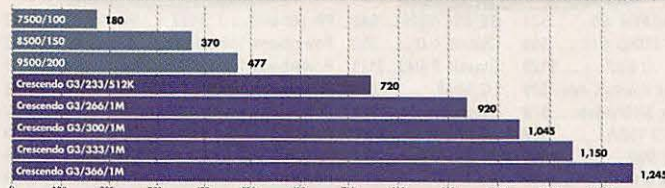
Video Options and Adapters

7100 or 8100 PDS AV/Video Adapter Kit for Crescendo G3	\$99 ⁹⁵
Sonata Pro 24 NuBus Video Card (up to 1152x870)	\$199 ⁹⁵
Radius 24XP NuBus Video Card (up to 832x624)	\$149 ⁹⁵



**PowerMac 7300/7500/7600/8500/8515/8600/9500/9515/9600
Wrkgrp Svr 7350/8550/9650/ • PowerWave • UMAX 1700/5900**

Crescendo G3 233 MHz/512K Cache	\$399 ⁹⁵
Crescendo G3 266 MHz/1MB Cache	\$599 ⁹⁵
Crescendo G3 300 MHz/1MB Cache	\$799 ⁹⁵
Crescendo G3 333 MHz/1MB Cache	\$1199 ⁹⁵
Crescendo G3 366 MHz/1MB Cache	\$1499 ⁹⁵



Mac Ilci/Ilcx*//lsl*//lvi/Ilvx • Performa 600

Presto 040 80/40 MHz 68LC040/128K Cache	\$199 ⁹⁵
Presto 040 80/40 MHz 68040/128K Cache/FPU	\$299 ⁹⁵
* Adapter required for Ilcx, lsl	\$49 ⁹⁵

512K Cache Card for 5400/5500/6360/6400/6500	\$99 ⁹⁵
1 MB Cache Card for 5400/5500/6360/6400/6500	\$199 ⁹⁵
1 MB Cache Card for 6100/7100/8100	\$149 ⁹⁵
1 MB Cache Card for 73/75/76/85/86/95/9600	\$139 ⁹⁵

Sonnet Technologies, Inc.
18004 Sky Park Circle, Irvine, CA 92614
Tel: 949-261-2800 Fax: 949-261-2461
E-mail: sales@sonnettech.com

800-786-6260
<http://www.sonnettech.com>



Booth #3951
Moscone
Convention Center
San Francisco
January 5-8, 1999

**Macworld
EXPO**

Visa, MasterCard and American Express no surcharge. Government, corporate and education PO's welcome. Sonnet products are covered by a three-year limited warranty. Prices are subject to change without notice. Returns require an authorization and are subject to a restocking fee. Sonnet, the Sonnet logotype, Crescendo, Presto, and the Simply Fast logotype are trademarks of Sonnet Technologies, Inc. The Power PC name and the PowerPC logotype are trademarks of International Business Machines Corporation, used under license therefrom. Mac Ilcx compatible through System 7.5.5. ©1998 Sonnet Technologies, Inc.

MEMORY

**ABSOLUTELY, POSITIVELY,
THE BEST
PRICES!**

Lifetime Warranty on all RAM!



Authorized
Value-Added Reseller
Service Provider

**WE'LL
BEAT
ANY
PRICE! ***

SDRAM-In Stock!

64mb	\$ 89
128mb	174
256mb	450

PowerBook Memory

32/64	G3/3400	\$ 67/94
128	G3/3400	187
16/24/32	1400	43/56/75
32/48	5300	76/99
32	500	72

168 Pin DIMMs

16/32 mb	\$ 23/39
64/128 mb	77/199
64 mb 3.3v/EDO	77

* iMAC & PB G3 RAM *

16mb	\$ 56
32mb	89
128 mb	186

Cache/VRAM

44/64/65	512k	\$ 40
61/7100	256k	10
72/76/85	512k	64
73/76/85/86	1mb	125
1 mb	VRAM	16
4mb	G3 VRAM	23

SIMMs 72 & 30 pin

72	16mb/32mb	\$ 22/39
72	64mb	\$ 120
30	4mb/16mb	\$ 9/28

Specials

Quantum 3.2 gb SCSI	\$ 230
Qntm Atlas 9.1 gb SCA	400
Jaz Carts 1 & 2 gb (each)	80
PB1400cs/117 12/750	975
PB1400cs/117 16/750/CD	1095
PowerPC 6100/60 8/230	350

PRINTER MEMORY & PC/LAPTOP MEMORY IN STOCK - CALL !!

WE BUY, SELL & TRADE MACS!

Order Online — www.macsolutions.com

11933 Wilshire Blvd, West Los Angeles, CA 90025

Fax: (310) 966-4433

University & School P.O.'s Welcome

VISA-Discover/MC-AMEX no surcharge

(800) 873-3RAM



All prices are subject to change. Not responsible for typographic errors. Limited to stock on hand. New Macintosh® computers available in-store only—not by mail order. Ad code #0922

MACINTOSH MEMORY UPGRADES

YOUR MACHINE	4MB	6MB	8MB	10MB	12MB	16MB	20MB	24MB	32MB	48MB	64MB	128MB	256MB
Apple PowerBook G3 & Wallstreet			59			56			79	109	139	269	899
Apple PowerBook 160, 165, 165C, 180, 180C, 190, 190CS	99	139	169	219		59			99				
Apple PowerBook 520, 520c, 540, 540c Notebook								80	99				
Apple PowerBook Duo 210, 230, 250, 270c, 280, 280c Notebook, 2300c/100 Notebook					69		81	28-99	36-139				
Apple PowerBook 1400, 2400, 3400C EDO, 5300 Series					49			50		99	129	179	
Apple Macintosh IIfx	10					60							
Apple Macintosh IIfx (64 pin), IIfx & IIfx	28					88					356		
Apple Macintosh Classic II, LC, LCII			30										
Apple Macintosh LCIII, LC475, LC550, LC575, LC580, LC499, LC520, LC580, LC630, LC5200	8	19				32			49				
Apple Macintosh II, IIfx (w/Pa)	48	109				96					298		
Apple Macintosh SE30	20					79					298		
Apple Performa 400, 405, 410, 430	20	30											
Apple Performa 450, 460, 466, 467, 475, 476, 550, 560, 575, 577, 578, 580	8					29			49				
Apple Performa 6110CD, 6112CD, 6115CD (pairs), 6117CD, 6118CD (pairs)	8					29			49				
Apple Performa 630, 630CD, 631CD, 635CD, 636, 636CD, 637CD, 638CD, 640CD	8	19				29			49				
Apple Performa 5200 Series 5200CD, 5215CD, 5300, 6100 Series 6116CD (pairs)	8	19				29			49				
Apple Performa 6200 Series 6200CD, 6216CD, 6218CD, 6220CD, 6230CD, 6290	8	19				29			49				
Apple Performa 6205CD, 6214CD, 6300CD, 6320	8	19				29			49				
Apple Performa 6400CD, 6360 (2K Refresh)						29			49		99		
Apple Centris 610, 650, 660 AV	8	19				29			49				
Apple Quadra 605, 610, 630, 650, 660AV, 800 (pairs), 840AV	8	19				29			49				
Apple Quadra 700, 900, 950, Apple Performa 600, 600CD	8	19				29			49				
Apple iMac (SDRAM)													
Power Macintosh G3 (all models)						29			39		149	279	659
Power Macintosh 4400/160, 5200, 5260, 5300, 5400, 6400/200, 6500/225, /250, /275, /300 (Edo)	8		19			29			49				
Power Macintosh 6200/75, 6100/90, 6100/66, 6100/66AV (pairs)	8	19				29			49				
Power Macintosh 7100/66, 7100/80, 7100/66AV (pairs)	8	19				29			49				
Power Macintosh 7200/75, /90, /120, /120PC, 7300/166, /180, /200, 7500/100, 7600/100, /120, /132, /200	8					29			49		99		
Power Macintosh 8100/80, /100, /110, 8100/80AV, /100AV, /110AV (pairs)	8	19				29			49				
Power Macintosh 8500/120, /132, /150, /180, 8600/200, /233, 9500/120, /132, /150, /180MP, 200, 9600/200, /233, /200MP						29			49		99		
Color Laserwriter 12/60 PS, 12/640 PS, 16/600 PS	16					29							

WE ALSO BUY BACK YOUR OLD MEMORY CALL FOR QUOTE.

The Memory Liquidators, Inc.

(800) 718-7755

www.memoryliquidators.com or E-mail: sales@memoryliquidators.com

531 Main St., El Segundo, CA 90245 Ph. 310-326-5656 • Fax 310-326-7790 • M-F 7 to 5; Sat. 8 to 12 noon PST
• Secure Web Site • Prices subject to change without notice • 20% restocking fee on all returns.



POWER COMPUTING/MOTOROLA

	16 MEG	32MEG	64MEG	16 MEG	32MEG	64MEG
POWER 80, 100, 110, 120	29.00	49.00	99.00	POWER TOWER PRO 200, 225	29.00	49.00
POWER CENTER 120, 132	29.00	49.00	99.00	POWER WAVE 664/120	29.00	49.00
POWER CENTER 150, 166	29.00	49.00	99.00	POWER WAVE 664/132, 150	29.00	49.00
POWER CENTER 180	29.00	49.00	99.00	POWER BASE (EDO)	29.00	49.00
POWER CURVE 661/120	29.00	49.00	99.00			
POWER TOWER 156/150	29.00	49.00	99.00			
POWER TOWER PRO 180	29.00	49.00	99.00			

APPLE POWERBOOK BATTERIES

Powerbook 140, 145, 150, 160, 165, 170, 180	69.00	Powerbook 2300, 520, 520C, 540, 540C	123.00
Powerbook 1400, 190, 190CS, 3400, 5300	133.00	Powerbook DUO 200, 210, 230, 250, 270, 280	112.00

CHECK OUT OUR WEBSITE FOR MORE APPLE BATTERIES!!!

NO SURCHARGE FOR MAJORCARD, AMEX, VISA OR DISCOVER. PURCHASE CHECKING ACCEPTED FROM FORTUNE 500, GOVERNMENT & INSTITUTIONS. California orders add 8.25% sales tax. Returned orders or orders, purchase orders, wire transfer, C.O.D. (cashiers check), cash & cashiers checks. Orders shipped by UPS, F.O.D. must be signed for. • All manufacturers part #'s are for ref only. • Min. Order \$40 • No refunds on shipping.

credit card charges verified for fraudulent use. **SORRY, No Refunds after 30 Days - Exchanges Only.** If you receive defective merchandise we exchange only—no refunds. We accept MC, VISA, Discover, AE, prepaid.

Memory & Upgrades

Services Repair • Data Recovery • Printing

Macworld[®]

SHOPPER

Shadow (800) 4-SHADOW 474-2369

PowerBook Memory

IMac PB G3 Series

SDRAM: 32/64/128M \$54/89/182

EDO: 32M \$35 64M \$115

DIMMs 32M/48M/64M/128M

FP/ EDO 16/32M \$22/38 \$65/ \$89/ \$99/ \$194

64M \$75 128M \$198

16M/32M \$49/ \$68

32M/48M/64M/128M 72

16M/24M/32M/48M \$42/ \$54/ \$72/ \$102

SDRAM/G3 Lifetime Warranty! - G3

32M/64M/128M/256M \$39/ \$86/ \$169/ \$199

16M/165/180(c) 61/71/81 256K/1M \$9/ \$115

10MB \$139 72-8600 \$35/ \$62/ \$122

Prices Subject to Change w/o Notice 44/64 \$25/ \$36/ \$169

Cache 256K \$11 2M G3 \$18

512K \$14 4M G3 \$22

1MB \$16 4M SMax \$46

VRAM 256K \$11 4M G3 \$22

512K \$14 4M G3 \$22

1MB \$16 4M SMax \$46

Volume No Surcharge Discounts

Low Price Guarantee: If ANY advertiser quotes you a lower price, call us LAST Edu./Gov. and we'll BEAT them!! PO's Welcome

Mac's Clones **UPGRADE**

DMS Data Memory Systems

Best Memory Prices!

800-662-7466

Shop 24hrs. On-line www.datamem.com

VISA MasterCard

LACIE **FOCUS** **GLOBAL VILLAGE** **SAMPO** **NEWTech** **tomago**

- SIMMs
- DIMMs
- ECC Memory
- EDO Memory
- Notebook / Memory
- Digital Camera Memory
- Printer Memory
- CPU Upgrades
- VRAM (Macintosh)
- Hard Drives
- CD-ROM Drives
- PC-to TV Scanners
- Flatbed Color Scanners
- Notebook Batteries
- Sys. Bd. Clock Batteries
- Modems
- Monitors

NEVER UNDERSOLD ON MEMORY!

We accept Commercial, Educational & Government P.O.s with Prior Approval

Digital Imaging

Slides & Negatives \$3.75

4x5 Chromes/Negs \$30

Large Posters & Displays \$45

Scanning: Hi & Lo Res

Photo CD Scans & LVT Output

Short Run 1200 dpi Color Output

Quantity Prints, Slides, Overheads

Show & Tell 39 W 38th St., NY, NY 10018

212 840-2912 • 212-840-7953 (fax)

POSTCARDS!

1000 Postcards \$145

1000 Business Cards \$60

Ready in 5-7 days!

Full color!
Unique beefy 15pt stock!
Glossy U.V. coating!

PostCard PRESS
(800) 957-5787

MacTECHS

INTERNATIONAL

Macintosh Repair, Sales & Upgrades

24 Hour Turnaround

Powerbook Specialists

Component Level Repair

Great Memory & Hard Drive prices

3337 El Camino Real
Palo Alto, CA 94306
Phone: 650.845.6400
Fax: 650.845.6411
www.mactechsinc.com

1-888-622-3493

WE GET TO THE CORE OF THE PROBLEM

DEADLINES?

www.regentdigital.com

Fast & affordable Indigo & Heidelberg Digital Printing

Visit our web site for prices and file transfers.
or call toll free 1-888-999-2638

800-WE-FIX-MACS

THE ONLY NUMBER FOR ALL MACINTOSH PARTS

- Free Diagnostics
- 24 Hour Turnaround
- Longest Warranties
- Largest Inventory of Parts
- Advance Exchanges

PowerComputing specialists

2202 N. FIRST STREET, SAN JOSE, CA 95131 • 800 933-4962 • www.allmac.com

WHY IS THE COMPETITION SHAKING?

BECAUSE

1-800-4-MEMORY IS HERE

WE CAN BEAT

ANY QUOTED PRICE ON ANY MEMORY FOR ANY COMPUTER (NOTEBOOK, DESKTOP, PRINTERS) ANYWHERE... PERIOD!

- LIFETIME WARRANTY
- FREE TECH SUPPORT
- NO CREDIT CARD SURCHARGE
- MOST ORDERS SHIPPED SAME DAY

CALL AROUND THEN CALL US

CHECK OUR WEB SITE FOR SPECIALS
WWW.18004MEMORY.COM

WHOLESALE WATERLESS COLOR PRINTING FROM YOUR COMPUTER FILES

1000 FULL COLOR BUSINESS CARDS FOR \$100 Sug. retail price \$179
1000 FULL COLOR POSTCARDS FOR \$149 Sug. retail price \$249

Printed waterless at 300 line screen from your computer files on Super Premium 10pt. Kromekote with our FREE scratch-resistant aqueous coating.

Christina Schisler
 phone: 609/909-1566
 fax: 609/909-1567
 email: computer-eze@csionline.net
 website: www.computer-eze.net

ComputerEZE
 LLC

Ask About
 Our Holiday
 Cards!

- BUSINESS CARDS
- POSTCARDS
- CD INSERTS
- CD TRAY LINERS
- BROCHURES
- BOOKLETS
- NEWSLETTERS
- POSTERS & MORE

PLAYSMART, INC.
 800-940-PLAY

FEATURING 300 LINE SCREEN WATERLESS OFFSET PRINTING

Rates for Brochures, Booklets and Flat Sheets are also available.

4-COLOR WATERLESS SPECIAL **1,000 PRESENTATION FOLDERS** **\$1499**
 9" x 12" 4-Color folders with 4" pockets and BC
 slits printed 4/0 from your files at 300 line screen on
 10 pt. Kromekote with FREE aqueous coating.
 Get 2,000 for only \$2,199 SUGGESTED RETAIL \$2,299

GRAPHIC ARTS
 AVAILABLE



Copycraft
 PRINTERS, INC.

4413 82nd Street • Lubbock, TX 79424 • FAX: 806.794.1305

QUARK
 Authorized
 Service Bureau

Factory Authorized
 SERVICE BUREAU
COREL

Email your requests for printing quotes to request@copycraft.com

1.800.794.5594

CALL TODAY FOR A **FREE** COPY OF OUR **NEW 28-PAGE** FULL COLOR CATALOG

Visit www.copycraft.com for more 4-Color Specials!

Choose 412 at www.macworld.com/GetInfo

Data Recovery in hours.

- Over 10 years of experience with clients worldwide including Apple, NASA, HP, and FedEx.
- We've recovered more than half-a-million megabytes of Mac Data alone.
- You only pay when there's a recovery.
- Express One-Day Service is available.
- Call 24 hours a day.

415-495-5556 • FAX 415-495-5553 • RESTRICTIONS MAY APPLY
 381 Clementina Street • San Francisco, California 94103



LAZARUS
 DATA RECOVERY

Working at the speed of business.

800-341-DATA

Choose 415 at www.macworld.com/GetInfo

MAC REPAIR & UPGRADE

24 HOUR SERVICE TURNAROUND • LONGER WARRANTY
 FREE DIAGNOSTIC • COMPETITIVE PRICE



DT & T
MACINTOSH
SERVICES, INC.

- * Specialize in component repairs:
 • Power Mac • Power Book • Logic boards
- * Advance Exchanges

800-622-7977

720 East Evelyn Ave., Sunnyvale, CA 94086 • Tel: 408-720-9899 • Fax: 408-720-9459
<http://www.dttservice.com>

PLUG IN!

Create Your Own Full Color Custom Promotional
 Cards To Market Your Business, Products & Services •
 Feature Websites, CDs & New Technology • Ideal
 For Mailers, Self-Promotion, Invitations & More!
 • Call Now For More Information & Free Samples!

Full Color
 Promo Cards

\$95
 500 copies

Modern Postcard™

1-800-959-8365

www.modernpostcard.com

©1993 Modern Postcard. All rights reserved.



Free Shipping
 Call for details

Digital Output
Overnight
 PC or Mac

Send PC/Mac files by FTP or
 Priority Air Express to Imagers
 and for most output services,
 your finished work is in your
 hands the very next morning.



XEROX
DocuColor 40
 Single or double-sided
 quality color laser printing.
 Great for newsletters...
 As low as \$.50 per side



SLIDE IMAGING
 Overnight is \$4.95.
 Economy is \$3.00
 in 48+ hours.

Call for a brochure on our services...
 4x5(8k) negative, pos., b&w output...\$35
 Fujix photo color prints... \$10.00/\$5.00



Digital Production Center
 INFO & QUOTES on the web
800.672.7029/404.351.5800
 1575 Northside Dr., Ste. 490 Atlanta 30318
www.imagers.com

Choose 413 at www.macworld.com/GetInfo

DATA RECOVERY: 800-440-1904

7 good reasons to choose DriveSavers:



1. We're the most trusted and respected data recovery specialists.
2. 24-hour, onsite, and weekend service available.
3. Proprietary techniques so advanced we retrieve data others might simply abandon.
4. Over 12 years of data recovery experience.
5. Certified to maintain most drive warranties.
6. Featured by CNN, NextStep, C-Net, Forbes.
7. All storage devices; Mac OS, DOS, Win95, WinNT, OS/2, UNIX, Sun, SGI, Novell.

©1997 DRIVESAVERS, INC.

Clip and save this ad. Visit DriveSavers at: www.drivesavers.com

DRIVESAVERS, INC. 400 BEL MARIN KEYS BLVD., NOVATO, CA 94949, INTL: 415-382-2000, FAX: 415-883-0780

Choose 414 at www.macworld.com/GetInfo

DATA RECOVERY

For **MAC** - (Hard Drives, Opticals, Removables)

By Nick Majors' DATA RECOVERY LABS

"The Best Data Recovery Service available
- Anywhere - at any Price!"

Dedicated in-house MAC specialists are available to work
on your emergency data recovery. Complete facility with
clean rooms and full MAC capabilities.

Free evaluations. All recoveries are 100% satisfaction
guaranteed. Complicated / top priority projects are
our specialty.

1-800-563-1167

www.datarec.com

USA • Canada • Japan • Brazil

Datarec.com
DATA RECOVERY LABS

GENEALOGY SOFTWARE

REUNION® 5

"SPECTACULAR" MacWorld, 1/98; "FREAKIN' AWESOME" by
MacAddict 2/98. Enter information easily. Link photos, sound,
& video. Create large wall charts, reports, mailing lists,
anniversary and birthday calendars. Share your family infor-
mation on the web. To order, call MacWarehouse 800-255-
6227. Visit our Web site: www.LeisterPro.com

LEISTER PRODUCTIONS, INC.

P.O. Box 289 Mechanicsburg, PA 17055
tel: (717)697-1378 • e-mail: info@LeisterPro.com

Choose 437 at www.macworld.com/GetInfo

COMPUTER INSURANCE

INSURES YOUR MAC

The Computerowners' (SM) insurance policy repairs or replaces
hardware, media and purchased software. \$49 a year covers
up to \$2,000 of equipment against theft, fire, accidents,
power surge, natural disasters and more! \$50 deductible. Call
for immediate coverage or information. 1-800-800-1492.

SAFWARE, The Insurance Agency, Inc.

5620 N. High Street, PO Box 656
Columbus, Ohio 43085

Choose 440 at www.macworld.com/GetInfo

MAC COMPUTER AND PARTS

Dos/Win on Mac Card

Radius Dos on Mac Card for 7"/12" PCI/5x86 133MHz for 12"
PCI-Pentium 133MHz/166MMX/233MMX and for LC-PDS
PowerMac 5x86. Scalit; Apple Dos Card for Centrals/Quadra-
486DX2/66MHz Radius network pkg for DOS/Mac cards &
ApplePC CA.\$79; MS-DOS6.22.\$15; Win3.1.\$20;
Win95.\$30; We export all Apple Computers and parts

NEXTPRO CO.,LTD. [WWW.NEXTRO.COM]

Tel&Fax: 213-385-3205/nextpro@wilshire.iccas.com

Choose 443 at www.macworld.com/GetInfo

BUSINESS CARDS

FULL COLOR BUSINESS CARDS

For Resale: Get the full spectrum of colors at 2400 dpi
for only \$89.00 for 1,000.

Price includes: Design, Printing, & Delivery to your door.

Stock weight: 12pt. coated; screen res. stochastic

COLOR VISION BUSINESS CARDS

1-800-475-9332

WWW.COLORV.COM

Choose 438 at www.macworld.com/GetInfo

CD-ROM DUPLICATION

CD-ROM REPLICATION

- Quantities from 500 discs to 10,000,000 +
- ISO 9000-certified manufacturing
- Complete, innovative printing & packaging: cardboard, jewel-box,
Tyvek®, and the patented Oasis Jewel-Free Box.

OASIS® DUPLICATION

www.oasisCD.com

michal@oasiscd.com • 800/697-5734

Fax 540/675-2500 • Flint Hill, VA 22627

Choose 441 at www.macworld.com/GetInfo

CLIP ART

GET FREE CLIP ART!

3000 Image Mega Pack FREE from Nova Development!
Premium-quality color clip art ideal for beginners and
experts. Fully scalable, compatible with all popular word
processing, graphics and desktop publishing programs.
Guaranteed to print perfectly on all printers (B&W or
color) Mention Code 617 to get this CD for \$4.95 S&H.

NOVA DEVELOPMENT CORPORATION

800.395.6682-US or Canada/818.591.9600-Outside

Choose 444 at www.macworld.com/GetInfo

CD ROM

CD-ROM Production Services

- All formats: Mac, ISO, Hybrid, Mixed Modes
 - Premastering, beta testing, or archiving
 - Mass Replication available, any quantity
 - Personal, Knowledgeable Service for 10 Years!
 - Certified Apple Developer • Low prices/fast delivery
- NORTHEASTERN DIGITAL RECORDING**
2 Hidden Meadow Ln, Southboro, MA 01772
508-481-9322 Fx:508-624-6437 CDNDR@aol.com

Choose 439 at www.macworld.com/GetInfo

RELIGION

Bible Study on Disk or CD-Rom

Full Featured. Fast & Friendly Bible study software.
As the leader in Bible study software since 1981
we have continued to listen to our customers
and provide them with the tools they need.
Call for a FREE catalog. <http://www.brs-inc.com/bible>

BIBLE RESEARCH SYSTEMS

2013 Wells Branch Pkwy. #304, Austin, TX 78728
(800) 423-1228 (512) 251-7541

Choose 442 at www.macworld.com/GetInfo

ClarisWorks 5.0 Special!

ClarisWorks 5.0 Bundle-Only \$59.95!

Includes ClarisWorks 5.0, 10 issues of the *ClarisWorks Journal*
and free membership in the ClarisWorks Users Group. (A \$139
value.) Add \$5 s/h (USA), \$10 s/h (Canada), \$15 s/h elsewhere.
Credit cards accepted. Specify Macintosh or Windows. Electronic
delivery of the ClarisWorks Journal outside the USA.

CLARISWORKS USERS GROUP

Box 701010, Plymouth, MI 48170

(888)781-CWUG; Fax: (734)454-1965; orders@cwug.org

Choose 445 at www.macworld.com/GetInfo

PROFESSIONAL DATA RECOVERY SERVICES.

Hard Drives, Floppy Drives, Syquest,
EZ-135, ZIP, JAZ, Optical & Bernoulli.

TOTAL RECALL®
THE DATA RECOVERY COMPANY™



800 743-0594 VISIT US AT... www.recallusa.com

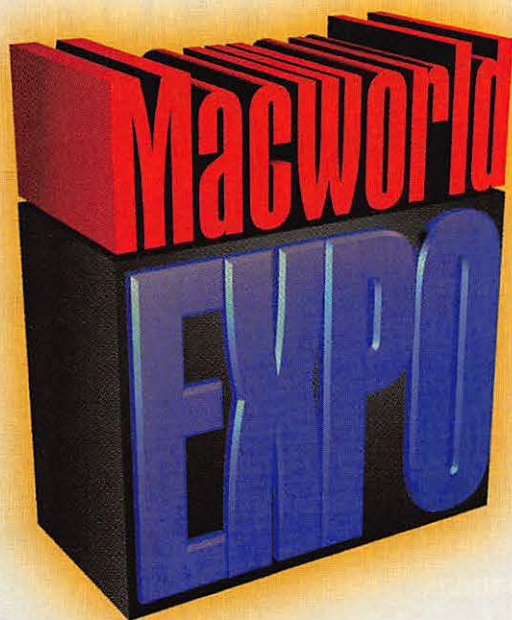
2462 WAYNOKA ROAD • COLO. SPRINGS, CO 80915 • TEL (719) 380-1616 • FAX (719) 380-7022

Choose 416 at www.macworld.com/GetInfo

DIRECTORY

THE

Future



For millions of computer users, Macintosh is synonymous with increased productivity and innovative technology advances. Come to San Francisco—home to a “think different” community—for the latest technologies and trends that will change the way you work, play and learn now and in the future.

At MACWORLD Expo/San Francisco, you'll demo, touch, see and feel all the hot new products—from more than 400 leading vendors. Learn time-saving productivity secrets through in-depth workshops, advanced and user-level conference programs. Hear from the brightest stars who are shaping the future of the Mac universe at the much-anticipated keynote address.

MACWORLD Expo/San Francisco has the latest solutions for:

- *the Internet*
- *digital content creation, management and delivery*
- *multimedia*
- *software development*
- *small business*
- *remote worker programs*
- *connectivity*
- *graphic design*
- *publishing*
- *education, research and development*

Take advantage of money-saving specials when you buy products right on the show floor.

Owned & Produced by:
IDG
WORLD EXPO

Sponsored by:
Macworld

Managed by:
IDG
EXPO MANAGEMENT
COMPANY

HERE AND NOW!

MACWORLD Expo/San Francisco

EXHIBITS: January 5-8, 1999

WORKSHOPS: January 4, 1999

MACWORLD/PRO CONFERENCE:
January 5-7, 1999

MACWORLD USERS CONFERENCE:
January 6-8, 1999

QUICKWORLDSM CONFERENCE:
January 7-8, 1999

Moscone Convention Center
San Francisco, CA

NEW
for
'99

INTRODUCING QUICKWORLDSM:

The QuickTimeTM Developers Expo and Conference. Running concurrent with MACWORLD Expo, San Francisco's Moscone Convention Center will host the launch of QuickWorldSM: the first conference and exhibit focused exclusively on emerging QuickTimeTM technology.

Discover what the future holds at MACWORLD Expo/San Francisco. Register to attend today!

VISIT: www.macworldexpo.com

CALL: **800-645-EXPO**

**YES! PLEASE SEND ME MORE INFORMATION ABOUT
MACWORLD EXPO/SAN FRANCISCO! I'M INTERESTED IN:**

☐ **Attending**

☐ **Exhibiting**

MCW

Name _____

Title _____

Company _____

Address _____

City/State/Zip _____

Phone _____ Fax _____

email _____

(if you would like to receive information via email about MACWORLD Expo)

Mail to: MACWORLD Expo, 1400 Providence Highway,
P.O. Box 9127, Norwood, MA 02062. Or Fax to: 781-440-0357

THIS IS NOT A REGISTRATION FORM.

TOTAL ANNIHILATION

The New Landscape of War!

The word is spreading across the map. Total Annihilation is poised to redefine real-time strategy games on the Mac.

Total Annihilation is a real-time war game featuring true 3D terrain and run-time generated 3D units. Tanks drive up and overhills, tilting and rocking with each bump in the landscape and impact with enemy weapons. Battle on diverse landscapes from lava worlds to vast island-dotted oceans. Build defenses high in the hills for a better view and a better shot. Planes bank and dive in intense air-to-air combat. Amphibious tanks drive into and dive underwater for surprise attacks.

Total Annihilation's 3D landscape is a revolution that demands deeper strategy and generates more realistic game play. Mobilize your forces and experience the new landscape of war!

Total Annihilation, winner of more than 50 awards worldwide is coming soon to the Macintosh.

800-229-2714

Call for a free catalog or visit our website:
www.wizworks.com/macsoft
or visit the GI Interactive online store:
<http://store.giinteractive.com>



©1997 Humongous Entertainment, Inc. All Rights Reserved. Created by Cavedog Entertainment, a division of Humongous Entertainment, Inc. Distributed and published by MacSoft, an affiliate of GI Interactive Software Corp. Cavedog Entertainment™ and Total Annihilation™ are trademarks of Humongous Entertainment, Inc. All other trademarks are the property of their respective owners.

MacSoft®

An affiliate of GI Interactive Software Corp.
2300 Berkshire Lane No., Plymouth, MN 55441

Choose 28 at www.macworld.com/getinfo

Giant 3D environments
Challenging landscapes

Full complement of
land, air and sea units

More than 150 units
and 50 missions

Extensive multiplayer
and internet support

Macworld ULTIMATE GAMING GUIDE

Macworld's Guide to Network Gaming

Nothin' but Net

BY CHRISTOPHER BREEN

GAMING HAS ALWAYS BEEN A SOCIAL affair. From Og, Gak, and Urd, who rolled boulders at carefully arranged mastodon bones by the local tar pit, to Lord Fanfiral and Lady Margraine, engaged in a trying evening of whist, gamers have gathered in groups. Isn't it odd, then, that until recently, computer gaming was largely a single-person pastime?

Thank heavens those lonely days are gone. Now you can eschew drab, computer-controlled opponents and instead challenge unpredictable, flesh-and-blood adversaries.

But how to go about it? Although most network games are relatively easy to configure, there are a few tricks that will help you on your way to gaming glory. We can't guarantee that you'll become the Monarch of Myth or the Queen of Quake, but we can help you take the first vital step: getting into the game.

Since you can't play computer games without a computer, let's begin there. Most contemporary computer

games simply require some variety of Power Mac, although first-generation systems, such as the 6100, 7100, and 8100, balk at processor-intensive games such as Bungie Software's *Myth* and MacSoft's *Quake*.



In order to get the most out of Internet and head-to-head games played over phone lines, outfit your system with the fastest modem possible. For interoffice gaming, on the other hand, chances are you'll be using the existing Ethernet network and won't need to add any more networking equipment to your Mac. Finally, you should have a pair of external speakers or a set of headphones and, if

the game merits it, a joystick—buy one with enough buttons to get the job done (see “Take Control,” *Macworld Ultimate Gaming Guide*, November 1998).

Once you have the right gear, there are several ways you can get in on the action.

INSIDE

Head-to-Head Gaming	187
Network Gaming	187
Internet Gaming	188
The Game Room	192

CIVILIZATION II

GOLD EDITION

WITH **MULTIPLAYER**



Who will be the next heir to the throne?
Dare to accept the challenge.

CIVILIZE YOUR FRIENDS

The imaginary hordes torching your village just turned into real people. Challenge a mix of human and AI opponents through Internet, modem, LAN, serial or hotseat gameplay. Because if you thought Attila the Hun was nasty, wait 'til you meet Frank the Dry Cleaner.

EXPAND YOUR CIVILIZATION

Includes the best-selling global strategy game Civilization II plus over 35 new scenarios in the add-on game packs Conflicts in Civilization™ and Fantastic Worlds™. Challenge yourself with the American Civil War, Jihad, After the Apocalypse, fantasy scenarios and much more!

800-229-2714

Call for a free catalog or visit our website:
www.wizworks.com/macsoft
or visit the GT Interactive online store:
<http://store.gtinteractive.com>

MICRO PROSE.

©1998 MicroProse, Inc. All Rights Reserved. Sid Meier's Civilization and MicroProse are registered trademarks and Civilization, Civilization II, CIV, CIV II and CIV II Fantastic Worlds are trademarks of MicroProse, Inc. or its affiliated companies. All other trademarks are the property of their respective holders.

MacSoft®

An affiliate of GT Interactive Software Corp.
2300 Berkshire Lane No., Plymouth, MN 55441

Choose 29 at www.macworld.com/getinfo

Head-to-Head Gaming

The simplest network connection pits you head-to-head against a single opponent. Head-to-head games are played over a two-way connection, via either a serial or modem-to-modem link.

Although using a serial connection is the least-expensive way to play network games, it requires that the two computers be in close proximity. To make the connection on two Macs, just plug a serial cable (sometimes known as an ImageWriter or StyleWriter cable) into the printer or modem port on each Mac. Turn on AppleTalk for both machines, and the physical connection is complete. Once you're in the game, you'll need to establish a serial link via Apple's Communications Toolbox. In the Connection Settings dialog box, choose Serial Tool as the connection method, select the port the Mac is connected to (Printer or Modem), and set the baud

rate to 57600. The baud rate for both Macs must match.

You can also play head-to-head via modem with most modern networked games. Games that support modem play also employ the Communications Toolbox. When you select Modem under a game's networking options, the Connection Settings dialog box appears. In this dialog box, you select the variety of modem you're using from the Modem pull-down menu; the baud rate of your modem; and the port your modem is connected to.

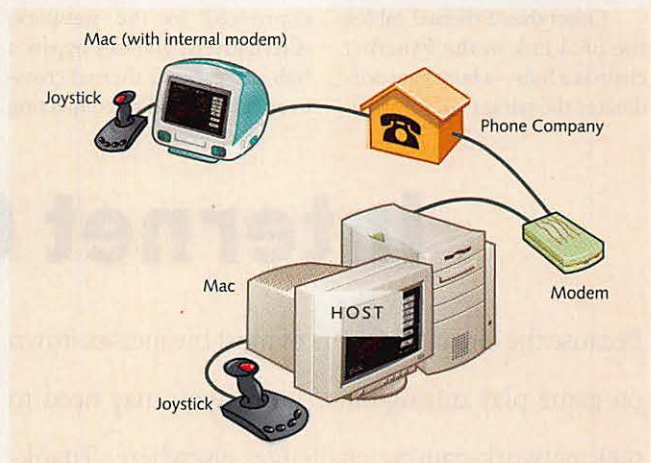
Most modern network games that support modem play allow you to choose whether you'll initiate or receive a call. Initiators enter their opponent's phone num-

ber in the Dial Phone Number field and click on OK to make the connection. If you're the receiver, enter your modem settings and click on OK, and your modem will wait for an incoming call. Unlike serial connections, modems can negotiate differing baud rates, so the two Macs' baud rates need not match.

Some older games, such as Bungie's *Marathon*, don't directly support modem play,



but you can still make the connection using Joe Kloss's NetLink Remote, a network extension that allows you to use AppleTalk networking over a modem connection. You can find NetLink Remote at www.macdownload.com.



DIAGRAMS BY ARNE HURTY

Network Gaming

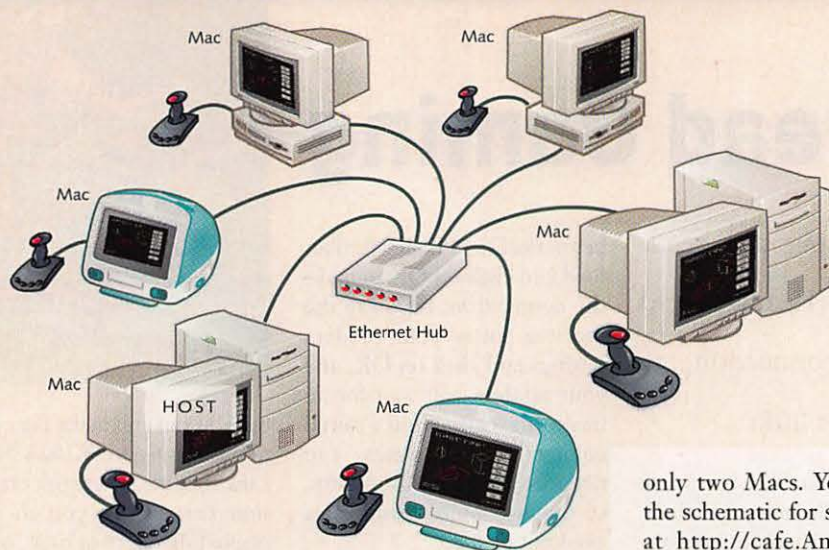
Head-to-head gaming is fine for two-person grudge matches, but when you want to go up against the heartless harridans in Human Resources who denied your workers' comp claim—and do so without venturing onto the Web—network gaming is the means to that end.

Although Mac games such as Blizzard Entertainment's *WarCraft II* can be played across a LocalTalk network, game performance is anything but perky. To get the most out of modern Mac games, you

need a Fast Ethernet connection. If you're playing in an office, you're pretty much set—configure the game and play on, Macduff. If you're trying this at home or setting up a small office, listen up: Most

Power Macs bear some variety of Ethernet connector—either 10BaseT or AAUI. If your Macintosh lacks on-board Ethernet, you can add an Ethernet card if you have a free NuBus, PCI, or—for Power-





Book owners—CardBus slot.

Other than Ethernet cables, the final link in the Ethernet chain is a hub—a box that coordinates the packets of informa-

tion that flow among the Macs connected to the network. Alternatively, you can bypass a hub and use an Ethernet crossover cable if you're connecting

only two Macs. You can find the schematic for such a cable at <http://cafe.AmbrosiaSW.com/netgames/network101.html#chap4>.

To configure the Mac OS for networking, consult the step-by-step instructions in Apple's Help system. While configuring the OS can be a little confusing, configuring

most games for a network connection is simplicity itself. After each person has launched a copy of a network game, the person who is designated the host selects the game's Host option. The other players then choose the game's Join option, and the fun begins.

If you're working in an office, your business may have unwittingly provided you with one of the great network-gaming accessories—speaker-phones. Nothing adds to the thrill of the hunt like hearing your victims howl with rage after you've administered Quake's "missile massage" and scattered their virtual giblets from one side of the game to the other. It's a damn shame that the big cheeses in most offices look askance at this type of innocent fun.

Internet Gaming

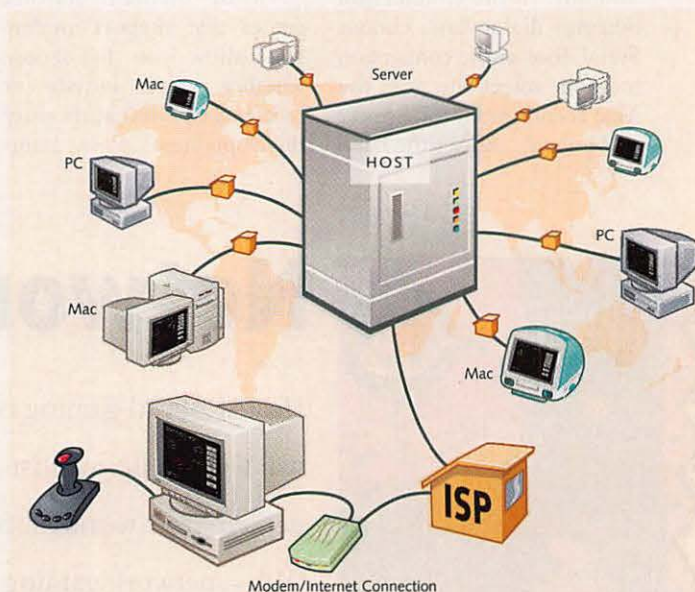
Because the Great Overseers of most businesses frown on game play during office hours, you may need to seek network-gaming challenges elsewhere. Thankfully, you need look no further than the Internet.

Despite what you've heard, Internet gaming isn't a recent phenomenon. For years, people have been playing online versions of such board games as chess, backgammon, and hearts. And text-based Dungeon and Dragons-style fantasy games (known as Multiuser Dungeons, or MUDs) have been around for nearly a decade.

What is new is the number of commercial games that now include an Internet-based multiplayer component. Instead of throwing the gauntlet merely across the cubicle wall, you can now challenge players from across the globe. Your weapons include such games as Myth,

Quake, Blizzard Entertainment's Diablo, WarCraft II, Access Software's Links LS, Graphic Simulations' F/A-18 Hornet, MacPlay's Descent, and MacSoft's Duke Nukem 3D and Master of Orion II.

There are a few different ways to play commercial games across the Internet. Games such as Links LS and MacSoft's Duke Nukem 3D and Shadow Warrior allow you to enter in the TCP/IP address of your fellow players. Once you enter those addresses, the game makes the connection across the Net. Of course, if your TCP/IP address is assigned dynamically (meaning that you're assigned a



new address each time you connect to your ISP), you must first log on to the Internet and then provide your address to your friends. Using chat software to exchange this information in a chat room can save you the

trouble of placing long-distance phone calls to fellow players.

Online games of MacSoft's Quake and Unreal are server-based—meaning that a fast server hosts the game and that players interested in a

Now on the Mac!

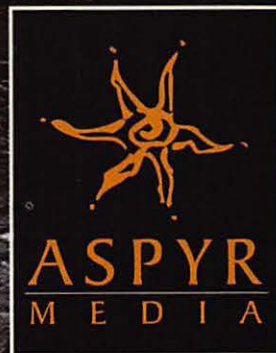
TOMB RAIDER

STARRING LARA CROFT

II

TM

Who says "Boys
shouldn't
play with
dolls"?



Now available at all
major retailers or call:
1-888-212-7797



W W W . A S P Y R . C O M

EIDOS
INTERACTIVE
www.eidosinteractive.com



westlake
INTERACTIVE

Choose 90 at www.macworld.com/getinfo

Tomb Raider II, Lara Croft and her likeness and Eidos Interactive, are trademarks of Core Design and Eidos, Plc respectively. © 1997/1998 Eidos and Core.

The Aspyr Media logo is a trademark of Aspyr Media, Inc. The Westlake Interactive logo is a trademark of Westlake Interactive, Inc. All other trademarks are the property of their respective holders.

fragfest log on to that server to play the game. To configure Quake on your Mac, select the Multiplayer option, choose Join Game, and enter the IP address of one of the many Quake servers scattered among the continents. You can find a list of Quake servers at www.gameaholic.com/servers/quake/. The Unreal CD-ROM includes an application called UnrealFinder, a utility for locating Unreal games on the Net. You can also play many games on Kali, a popular cross-platform game-server system. Kali can be reached at www.kali.net.

Another variety of server-based games are those hosted by the companies that make them. Two such services are bungie.net and battle.net. Bungie.net is the home of the online version of Myth: The Fallen Lords and Myth II: Soulblighter. Battle.net is Blizzard Entertainment's host service for Net-based Diablo and StarCraft games. The advantage of having games hosted on a central server is that you can always find other people to play with. Additionally, because these servers are the source for online play for specific games, players can be ranked. This allows combatants to carefully select opponents with similar skill levels and makes it possible to hold Champion of the World competitions. Bungie.net can be found at www.bungie.net, and battle.net resides at <http://battle.net>.

Whether you prefer the intimacy of head-to-head exchanges or the kind of multiplayer melees found in a network and in Internet games, this much is clear: Mac gaming is no longer a lonely enterprise. Join us—you're just in time for the game. **m**

Contributing Editor CHRISTOPHER BREEN coauthored *The Macintosh Bible Guide to Games* (Peachpit Press, 1996).

Rules of Engagement

After years of playing against unfeeling computer opponents, it can be difficult for newbie network gamers to remember that the pixelated creatures on their Mac's screen represent human beings—human beings with memories and the capacity to hold a grudge. The days of fragging your friends and gunning down your wingman for the sheer joy of it are over if you expect your network-gaming career to be long and fruitful. Want to stay in the game? Then remember the following:

- Unless it's the point of the game—a Quake Deathmatch or Myth battle, for example—player killing is a strict no-no. If you and your friends have agreed on a cooperative Diablo exploration, it isn't cool to plant a few arrows in your buddy's back.

- Don't take your ball and go home. If

you're participating in a game and losing, it's poor form to break your network connection.

- Cheating is for losers; don't do it. Regrettably, there are a lot of smart folks who can figure out ways to cheat their way through a network game. If you suspect someone of cheating, try talking to that person about it after the game. If that doesn't work and you think this rapsallion may be a problem for other players (and you're playing a server-based game, such as Myth or Diablo), consider turning the rogue in to the proper authorities. If the cheater is someone in your office—and you have other reasons for wanting to see the last of the little sneak—anonymously report that person to the boss for playing games on company time, and practice your best “Who me?!” look.

Network Gaming Strategies

FINDING YOURSELF ON THE LOSING END OF MOST NETWORK GAMES? TRY THESE TIPS.

Myth: The Fallen Lords

- Games such as Steal the Bacon and Territories favor those with the fastest troops. If you're playing on a large map, consider trading in your Thrall for speedier forces.

- Remember that Ghòls can pick up and use items littering the landscape. Have your Ghòls pick up Wight remains—they'll use them to paralyze opposing troops and then attack the unmoving enemy.

- Thousands of years of warfare have taught us this much: those who occupy higher ground have the advantage.

Diablo

- Make a backup of your Diablo multiplayer files before you log on to battle.net. That way, if you're killed you can restore your old character.

- There are lots of players who cheat on battle.net. To avoid them, play with your friends and password-protect your games.

- If you have two Macs, play a game via an AppleTalk connection to build up one character's attributes, inventory, and bank account. Sure it seems like cheating, but walking into a battle.net dungeon with a weak character will get you killed every time.

Quake

- As you run away from your enemy, find a 90-degree turn, and just before you make the turn, fire a couple of grenades at the wall in front of you. The grenades will bounce off the wall and, with luck, put the hurt on your pursuer.

- Learn to *rocket jump*. This is similar to Marathon's *grenade hop* technique. Simply run forward, and while facing down, launch a rocket at your feet while jumping. If you have enough armor and health to survive the explosion, you'll be propelled far into the air.

Other 3-D Shooters

- Don't depend on the keyboard alone. You'll find that you're more agile if you use a mouse in addition. Unreal requires that you use the mouse for many actions—you'll grow to appreciate this requirement.

- Learn the levels before engaging in network play. Know where the hidden areas are; where you can pick off your opponents with impunity; and most important, where the armor and health power-ups are located.

- Learn to *circle strafe*. To do so, keep your opponent in sight and simultaneously step left and turn right. This makes you tough to hit while you're pouring on the damage.

THE UNTOUCHABLE

Finally... combat for the Mac™!

Six Play Modes

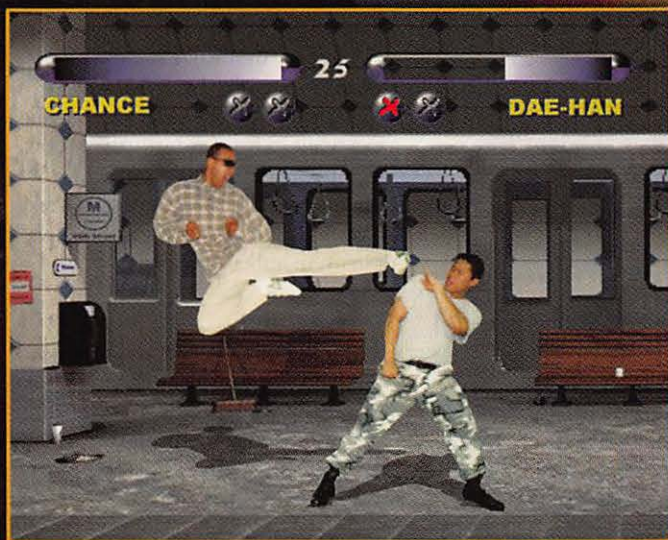
Arcade • Battle • Team • Challenge
Practice • *Plus bonus rounds!*

Stunning Soundtrack

Future Sound of London • Juno Reactor
Sister Machine Gun • Pistel • Many More

Hollywood-Style effects

Cinematic camera • Spectacular animation
Professional Stunts



Featuring Jon Valera



as "The Untouchable"

Play any of 19 smoothly animated, live video characters. Controlled in real time, each character is modeled from a highly talented martial artist with a unique fighting style, making for some of the most realistic combat ever.

Available at
your local retailer
or call Power Media at
503-684-8232



www.powermedia.com

Pmi
POWER MEDIA

©1998 Creative Edge Software, Inc. Published and distributed under license by Power Media, Inc. Macintosh is a registered trademark of Apple Computer, Inc. All other trademarks are the property of their respective owners.

The Game Room

by Philip Dyer

Game Hall of Shame

HIGHLIGHTING THE LOW POINTS IN MAC GAMING

FOR EVERY GREAT GAME we inaugurate into our Game Hall of Fame each December (see "20 Unforgettable Games," elsewhere in this issue), there's a real stinker or a notable no-show on the Mac platform. And so I submit to you my Game Hall of Shame: a collection of this year's low points in Mac gaming. The envelopes, please.

Rather Just Go Outside Award

Deer Hunter This virtual hunting game invites players to search for deer droppings and then hang around them until a deer comes close enough to shoot—what could be more fun? It was the surprise hit of last year's PC gaming crop, but Mac sales have been sluggish. I guess Mac users are just more selective about how they spend their money... otherwise they'd be using PCs.

Be Right Back Award

Pax Imperia: Eminent Domain The original, Mac-only Pax Imperia went cross-platform in this sequel. Unfortunately, its manual became PC-only. And would somebody please tell me whose idea it was to design a real-time network game that takes hours or even days to complete but doesn't allow players to pause for bathroom breaks?

Flash over Function Award

Weekend Warrior These guys spent so much time pushing the graphics envelope on this first-person fighting game—the game required a hardware graphics accelerator before they were de rigueur—that they forgot to make it fun to play. It saddens me to add this Edsel-esque game to the Hall of Shame, but it was a huge disappointment.

No Brain(er) Award

Quake II This immensely popular shooter has been available on the PC for a year, but sadly, executives at id Software announced long ago that they would port Quake II only to the Rhapsody operating system—now there's forward thinking for you. Hopefully they'll change their minds once Mac OS X is available.

Scrooge Award

Oddworld I couldn't turn on my TV or open a magazine during the 1997 holiday season without seeing an Oddworld ad. For just a fraction of its enormous marketing budget, this PC game could have been ported to the Mac as well. So

have been quickly followed by collections of extra levels and new scenarios, which greatly extend their playing time. So where the heck are those expansion packs for the Mac versions?

Unclear on the Concept Award

Jedi Knight Steve Jobs announced at Macworld Expo that our prodigal friends at LucasArts would once again be churning out Mac products. Unfortunately, none of them will be games. The rumor is that a new children's title will use the Jedi Knight game engine to teach kids about math. Sure it's a noble idea, but why not use the Jedi Knight engine to produce games such as... oh, I don't know... Jedi Knight?

Poor Sports Award

Sports-Game Developers Plus, what's up with the *complete lack* of sports games for the Mac? Every once in a while, a fringe sports game (bowling, pool) comes out, but when was the last time you saw a Mac football, basketball, or baseball game? Yeah, I can't remember one, either.

Take Action!

The good news is that you (yes, you!) can help improve the current state of Mac gaming. Strong iMac sales have already begun to encourage game developers, but you can serve up your own swift kick in their pants by making your desires and opinions heard. Just point your browser to www.macworld.com/features/1298/games.html, and speak your mind to any of the developers on that page. Who knows? You might just get what you want. **m**

Senior Online Editor PHILIP DYER secretly sneaks over to his PC friend's house at night to play Quake II—shhhh!

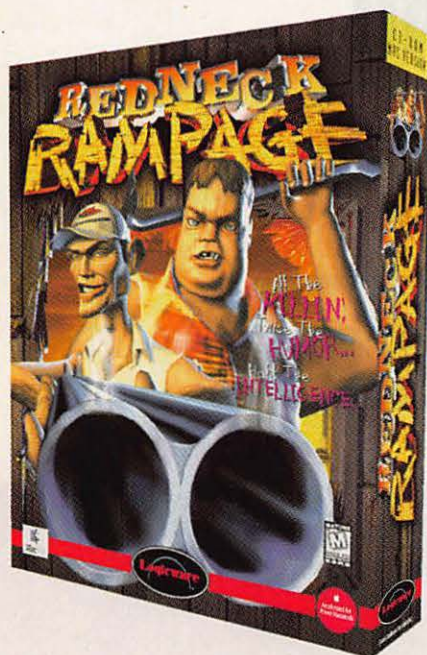


while all the other kids found copies of Oddworld in their stockings, the Mac children were left out in the cold.

Can't Get Enough Award

Expansion-Pack Developers The PC versions of best-selling games such as Diablo, Duke Nukem 3D, and Quake

Macs Can Have Fun, Too!



Redneck Rampage

**A butt-kickin', Gun-Totin' 3D
Romp Through Hickston,
U.S.A!**

Take your high tech Mac to redneck country! Battle through 14 high-resolution levels to get your prize pig back from thieving aliens! You'll venture through Mortuaries, Chicken Processing Plants, Trailer Parks and heaps more backwoods vacation spots. The most fun you'll ever have with your Mac, pork rinds and dynamite!



**Sizzlin hot
for your Mac.
From Logicware.**



Shattered Steel

22nd Century armored conflict! Pilot advanced robotic fighting machines in this adrenaline pumping 3D action simulation. In the future, you don't rebuild, you reload! Explore planets, fight robotic monsters, master a vast arsenal, even challenge your friends over a network!



Tempest 2000

The arcade classic with a modern twist! Immersive addictive arcade action like you've never seen before on your Mac. With a rocking soundtrack, eye-popping graphic effects and nonstop gameplay, Tempest 2000 is not to be missed!

"Tempest 2000 is quite literally a jewel" -- Inside Mac Games



Killing Time

A haunted island, a decades old mystery and a host of dangers await! Enter the detailed 3D world of Killing Time and explore the island estate of Tess Conway to discover what happened one fateful night, long ago. The thick intrigue will draw you in, but can you get back out again?



AstroRock 2000

Aliens, asteroids and rock n' roll! AstroRock 2000 is an action game with a lot of attitude...and explosions. Become galactic star Zed Nopher and save the universe from rock hating aliens! More planets, aliens, wisecracks, rock tunes and action then you've ever seen on your Mac!



COMPUSA
MICRO CENTER
THE COMPUTER DEPARTMENT STORE®



1-800-706-9884
PLEASE MENTION CODE LWMAC



Fun is logical.

www.logicware.com

Logicware, Inc.

20628 E. Arrow Hwy. #6

Covina, CA 91724

Toll Free Orders 1-888-LOGIC45

All trademarks are property of their respective holders. Penguins prefer single button mice. Mongeese prefer trackpads.

WE'VE GOT THE MAC MARKET COVERED

O N - L I N E

MacWEEK.com

«eMediaweekly.com»

iMacworld

WWW.MACWEEK.COM

GET IT ALL HERE NOW -- NEWS, MAC THE KNIFE, MAC/BUSINESS AND MORE!

WWW.EMEDIaweekly.com

THE CENTRAL CLEARING HOUSE FOR NEWS AND INFORMATION IN THE DIGITAL
PUBLISHING ARENA -- FEATURING OVER 500 LINKS!

WWW.IMACWORLD.COM

GAMES, GADGETS, GEAR -- IF IT'S FUN, YOU'LL FIND IT HERE!

Attention Marketers!
80,000+ Unique
Visitors/Day

7,000,000
Page Views/Month
We've got you covered!

Macworld
o n l i n e

WWW.MACWORLD.COM -- WE'VE GOT IT ALL COVERED.

LINUXWORLDTM

CONFERENCE & EXPO

Linux Takes Center Stage!

KEYNOTE SPEAKER: Linus Torvalds, Creator of Linux
March 2, 1999 ■ 9:30AM -10:30 AM



**Introducing
LinuxWorld Conference:
March 1-4, 1999
Expo: March 2-4, 1999
San Jose Convention Center
San Jose, CA**

Now Linux has a brand-new show of its own. LinuxWorld Conference & Expo makes its debut March 1, 1999. It's going to be a blockbuster, because the Linux OS is the most talked-about technology in the IT industry. Attend LinuxWorld at the San Jose Convention Center and prepare to step into your own starring role in this rapidly emerging industry!

Geared to developers, enthusiasts and professional end-users, the Conference program will feature issues and solutions focused on Linux technology. There will be fifteen pre-conference tutorials and over 40 conference sessions. Attendees will include IS managers and decision-makers from Fortune 1000 companies, Linux developers, ISVs, VARs, OEMs and system administrators. The Expo will feature more than 100 emerging companies and organizations dedicated to Linux products and services.

Reserve your seat now! For more information, complete and fax or mail the coupon or visit:

www.linuxworldexpo.com

On the Web site, you'll get the latest updates, including conference session descriptions, show highlights, the exhibitor list, and more.

**YES! Tell me more about
LinuxWorld Conference & Expo '99
in San Jose. I'm interested in**
☐ Attending ☐ Exhibiting

Name

Title

Company/Organization

Address

City/State/Zip

Phone Fax

email

Mail to:
LinuxWorld Conference & Expo
c/o IDG World Expo
3 Speen Street ■ Suite 320
Framingham, MA 01701
FAX: 508.620.6668
1.800.657.1474

MCW

Flagship Sponsor:

Online Sponsor:

Owned and Managed by:

LINUXTM
JOURNAL

Linux
WORLD

IDG
WORLD EXPO

The Desktop Critic

by David Pogue

Nuclear Browser Wars

NETSCAPE VERSUS MICROSOFT: THERE MAY BE NO SURVIVORS

THIS COLUMN ALWAYS gets entertaining feedback: e-mail, paper mail, wacky business proposals. But no column ever chomped on a raw nerve like "Software Therapy" (*The Desktop Critic*, September 1998), in which I hinted that, for the first time in its life, Microsoft may have come up with a couple of decent products.

"If you love Microsoft so much," wrote one livid reader, "buy a Windows machine and get out of our magazine."

"I was disgusted by David Pogue's transparent shilling for the Microsoft P.R. machinery," wrote another. "How much did they pay him?"

And then there was the anonymous envelope containing a copy of my article—machine-shredded into confetti. "Please recycle the paper and ink used in creating this Microsoft brown-nosing bull****," read the note. Wow, good thing Ted Kaczynski is already in jail.

The hot-button issue seemed to be my discovery that Microsoft Internet Explorer was, at that moment, a more stable and more useful Web browser than Netscape Navigator. In fact, Navigator 4.0.3 (current at the time of the article) crashed so often, I was aching for *any* browser that would simply stay aloft. I was getting dozens of e-mails that asked: "How can I stop Navigator from crashing?" Eventually, I wound up creating a macro with WestCode's OneClick to respond. It typed out: "Navigator is the buggiest piece of work I've ever seen. You have only one choice: Switch to Microsoft Internet Explorer."

Meanwhile, I had indeed begun experimenting with Explorer. Frankly—ladies and gentlemen, start your shredders—it was teeming with unique and innovative features. How can anyone browse the Web without Explorer's text-enlarging buttons? (Fie on thee, designers of 8-point Web

pages!) Wouldn't you like to be able to turn off blinking ads? Build your own strip of Web-page icons? Choose from a menu of sites you've visited on previous days? All these are Explorer-only features I quickly learned to love.

Switching to Explorer does come at a steep price, however: speed. On its worst day, Netscape Navigator still feels twice as fast as Explorer 4.01. Using Explorer was like switching down to a 14.4-Kbps modem. I wept inside, but I just couldn't afford to restart my Mac 99 times a day to accommodate Navigator's crashiness.

And then a horribly embarrassing thing happened: somebody forwarded my

Explorer speed, somehow the pain isn't so bad. (Nowadays, my e-mail macro says: "Use Netscape Navigator 4.0.5 if you want speed and stability; use Internet Explorer if you want features.")

So, great: out of fast, stable, and useful, we can choose only two. That's the downside of the Microsoft/Netscape browser giveaway: it's a suicide pact. It's an insane, unsustainable race for supremacy. Both companies spend millions rushing version after version of these programs to market, ready or not. Neither makes a nickel from them. Both want their browsers running on as many machines as possible. The question is: *why?*

Nobody knows Microsoft's answer. Some have speculated that once Uncle Bill has driven Netscape out of business, he'll begin charging a penny per Web page we visit—and we won't have any other browser alternative. Unfortunately, Microsoft's strategy forces Netscape to play the free-browser game too. Netscape certainly can't charge \$50 for its browser while Microsoft is giving its own program away.

But we, the consumers, aren't the winners. We're forced to swallow whatever Microsoft and Netscape crank out, garbage or not. And as

these free browsers grow buggier and more bloated, we can't exactly vote with our wallets; the Microsoft/Netscape suicide pact prevents any rival browsers from being developed, ever.

So don't worry about my becoming a Microsoft shill. Yes, I admit it: I love Word 98. But look at the bright side: there are still 83,407 other Microsoft products left to loathe. **m**



"Navigator is buggy" message to a guy he knew at Netscape. The Netscape guy e-mailed me directly. While not denying previous versions' lameness, he politely suggested that I try the very latest: version 4.0.5. He swore up and down that it was rock-solid, that c|net had declared it even more stable than Explorer.

With a heavy sigh, I figured I owed him the courtesy of trying it—and *he was right!* In three months, Navigator 4.0.5 hasn't even *thought* about unexpectedly quitting. I miss my Explorer features, but with my Web pages loading at twice their

DAVID POGUE (www.davidpogue.com) is the author of a book about a Microsoft-free palmtop: *PalmPilot: The Ultimate Guide* (O'Reilly, 1998).



This EPS image was printed on an inkjet **without** StyleScript



The same EPS image printed on an inkjet **with** StyleScript

It even sharpens pencils

**StyleScript sharpens your
EPS images by turning your
inkjet into a genuine
Adobe PostScript printer**



Adobe PostScript

If you've been using your inkjet to print EPS clip art and graphics, you've probably seen the "jaggies". StyleScript is a software solution that eliminates jaggies by turning your printer into a genuine Adobe PostScript printer.

For only \$99, you can print:

- ◆ crisp clean EPS images
- ◆ sharp PostScript fonts at any size
- ◆ improved screen/dither patterns
- ◆ more accurate color

StyleScript supports inkjets from Apple, Canon, Epson, and HP, including the HP DeskJet 1120C.

Call now: 888-842-5313
or visit: www.infowave.com



StyleScript.

4664 Lougheed Highway, Suite 188, Burnaby, BC, Canada V5C 6B7 PHONE: 604.473.3600 FAX: 604.473.3699 e-mail: info@infowave.com
© 1998 Infowave Wireless Messaging Inc. Infowave, Infowave logo, StyleScript, & StyleScript logo are trademarks of Infowave Wireless Messaging Inc. which may be registered in certain jurisdictions. All other trademarks are property of their respective owners.

Choose 32 at www.macworld.com/getinfo



HOW'S YOUR SEARCH FOR MAC ACCESSORIES GOING?



Kensington, Mouse-in-a-Box, Turbo Mouse and Mice, and Orbit and Keyboard-in-a-Box are trademarks of ACCO World Corporation. All other registered and unregistered trademarks are the property of their respective owners. Kensington sells input devices that are compatible with Apple's Macintosh computers. ©1998 Kensington Technology Group, a division of ACCO Brands, Inc.



Hey, we know the places you can buy Macs and Mac stuff aren't exactly popping up like Starbucks these days. But we've got you covered. With high performance accessories like our TurboMouse® and Orbit™ trackballs, easy-to-use Mouse-in-a-Box®, and 2- and 4-button mice. And now there's our hot new Keyboard-in-a-Box®. You see, we've been making Apple products since 1981. And we're going to keep right on making them, until the Feds shut down Microsoft and Apple regains its rightful place as the king, the sovereign monarch, the mighty potentate of the cyberuniverse. Until then, check out the Maccessories® at www.kensington.com.

KENSINGTON

Smart design at work.

Choose 1 at www.macworld.com/getinfo